About the Power Supply

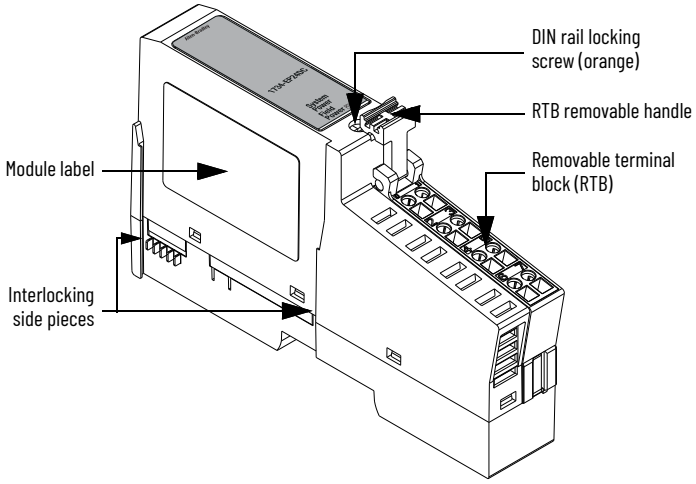
The POINT I/O expansion power supply passes 24V DC field power to the I/O modules to the right of it. The expansion power supply extends the backplane bus power for up to 17 I/O modules to the right of the supply and creates a new field voltage partition segment for driving field devices. The expansion power supply separates field power from I/O modules to the left of the unit, effectively providing functional and logical partitioning for the following:

- Separate field power between input and output modules
- Separate field power to the analog and digital modules
- Group modules to perform a specific task or function

The dark-gray color of the expansion power supply allows for easy visual inspection and identification. See Figure 1 to identify external power supply components.

Use multiple expansion power supplies with POINT I/O adapters to assemble a full system. With any POINT I/O adapter, use an expansion power supply to add additional modules in 4...17 module increments, for a total of 63 I/O modules.

Figure 1 - POINT I/O 24V DC Expansion Power Supply



Install the Power Supply

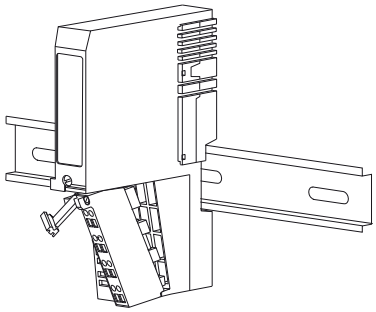
To install the expansion power supply on the DIN rail, proceed as follows.

1. Position the power supply vertically above the DIN rail.
2. Engage the interlocking side pieces with the unit on the left.
3. Press down firmly to install the power supply on the DIN rail. The locking mechanism locks the module to the DIN rail.

Remove the Power Supply

To remove an expansion power supply, proceed as follows:

1. Pull up on the RTB removal handle to remove the terminal block.



2. Remove the module to the right of the 1734-EP24DC or 1734-EP24DCK power supply from its base unit.
3. Use a small-bladed screwdriver to rotate the DIN rail locking screw to a vertical position. This releases the locking mechanism.
4. Lift straight up to remove.

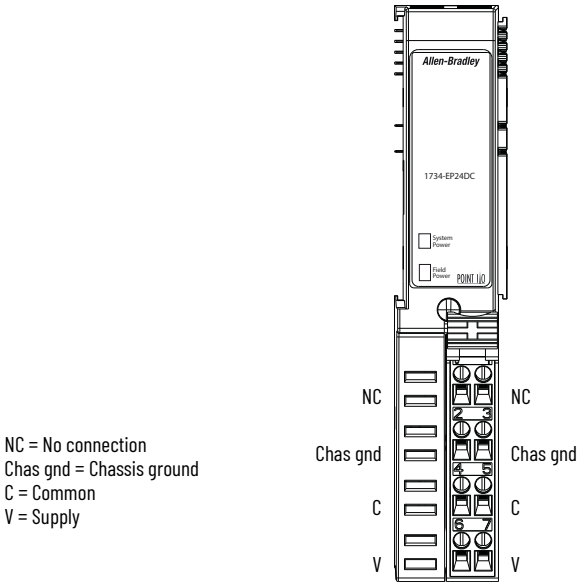
Replace the Power Supply

To install a replacement expansion power supply, proceed as follows.

1. Remove the module to the right of the power supply from its base unit.
2. Position the power supply vertically above the DIN rail.
3. Slide the power supply down allowing the interlocking side pieces to engage the adjacent modules (both left and right sides).
4. Press firmly to seat the power supply on the DIN rail. The power supply locking mechanism snaps into place.
5. Reinsert the module into the base next to the expansion power supply.

Wire the Power Supply

1734-EP24DC and 1734-EP24DCK

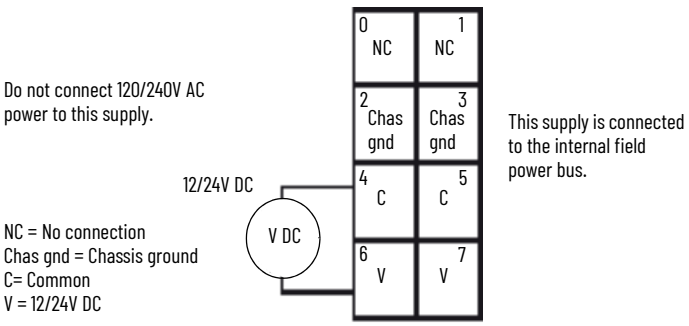


WARNING: If you connect or disconnect wiring while the field-side power is on, an electric arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

ATTENTION: Use the 1734-EP24DC and 1734-EP24DCK expansion power supplies only with adapter class products.

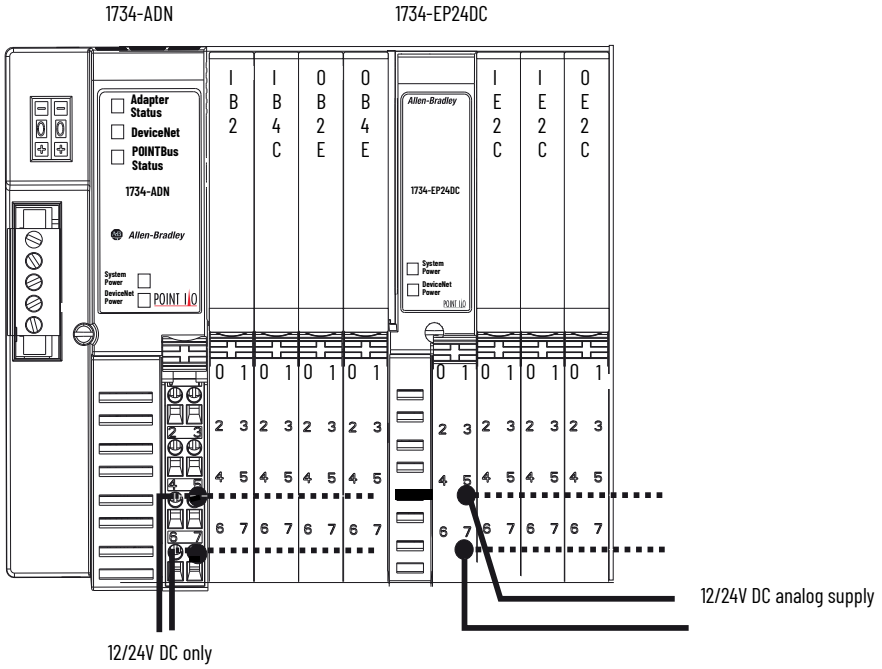
ATTENTION: Use the 1734-EP24DC and 1734-EP24DCK expansion power supplies only with POINT I/O adapters, such as the 1734-ADN DeviceNet adapter.

12/24V DC Wiring

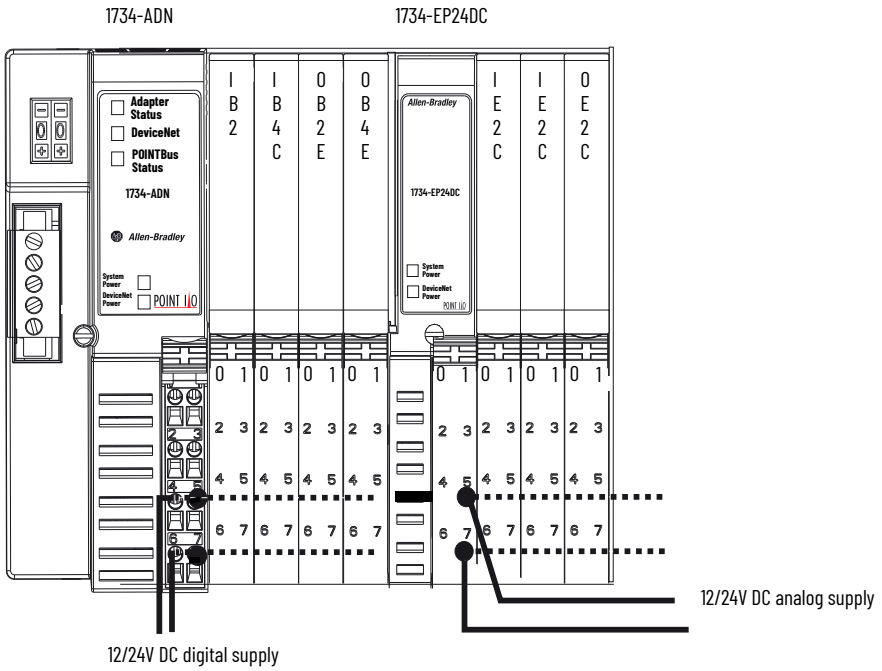


Connect	Terminal	Terminals (for continuing power)
+V DC	6	7
-V DC	4	5
Chas gnd	2	3
12/24V DC becomes the internal field power bus for modules to the right.		

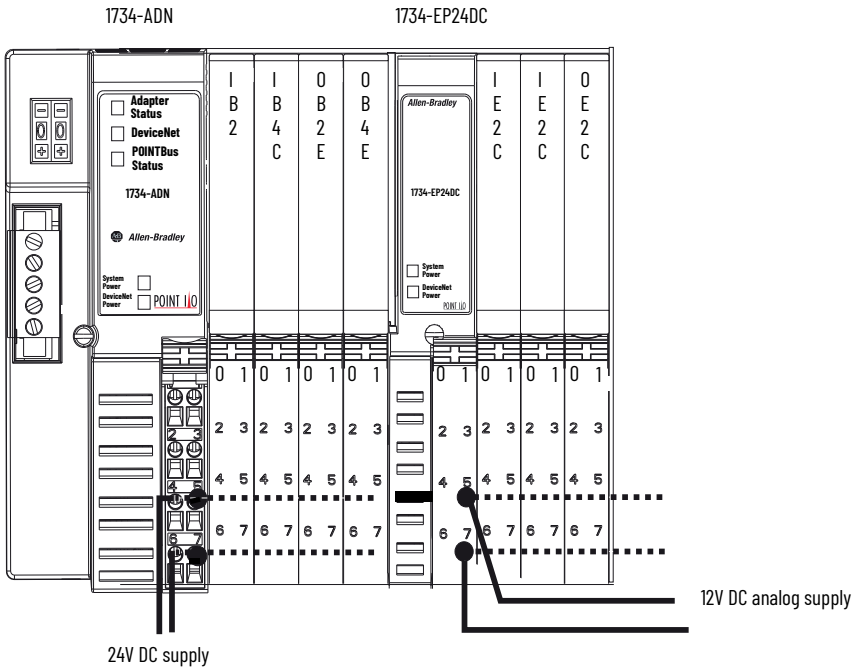
Example of Continuing Power



Example of Functional Partitioning



Example of Logical Partitioning



Interpret Status Indicators

See Figure 2 and Table 1 for information on how to interpret the status indicators.

Figure 2 - POINT I/O 24V DC Expansion Power Supply

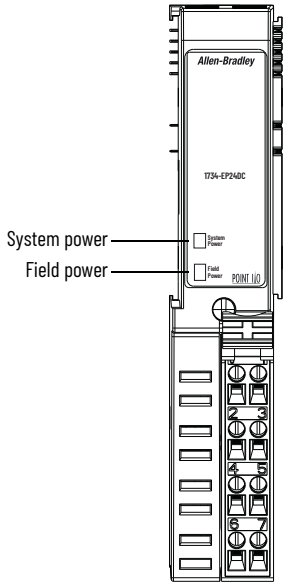


Table 1 - Interpret Status Indicators

Indicator	Status	Description
System power/Field power	Off	No power is applied to the device.
	Steady green	The device is operating normally.

Specifications

POINT I/O 24V DC Expansion Power Supply – 1734-EP24DC, 1734-EP24DCK

Attribute	Value
I/O module capacity	4…17 modules, depending on current rating of each module
Input voltage rating	24V DC nominal 10…28.8V DC range
Field side power requirements	24V DC (+20% = 28.8V DC max) @ 400 mA max
Inrush current, max	6 A for 10 ms
Indicators	1 green field power status indicator 1 green 5V system power indicator
POINTBus™ output current	Horizontal mounting – 1 A @ 10…19.2V input; 1.3 A @ 19.2…28.8V input Vertical mounting – 1 A @ 10…28.8V input See Current Derating for Mounting on page 10.
Input overvoltage protection	Reverse polarity protected
Interruption	Output voltage stays within specifications when input drops out for 10 ms @ 10V with maximum load
Module location	Between I/O modules in POINT I/O system Breaks field power bus
Limitations	Use with POINT I/O adapters only
Dimensions (H x W x D), approx	79.8 x 25.3 x 133.1 mm (3.14 x 1.0 x 5.24 in)
Weight, approx	120 g (4.3 oz)
Terminal base screw torque	0.6 N•m (7 lb•in)

General Specifications

Attribute	Value
Power consumption, max	9.8 W @ 28.8V DC
Power dissipation, max	3.0 W @ 28.8V DC
Thermal dissipation, max	10.0 BTU/hr @ 28.8V DC
Field power bus supply voltage, nom	24V DC
Field power bus voltage range	10…28.8V DC
Field power bus supply current, max	10 A
Isolation voltage	50V continuous, tested to withstand 2600V DC for 60 s
Enclosure type rating	None (open-style)
North American temp code	T4A
UKEX/ATEX temp code	T4
IECEx temp code	T4
Conductor size	0.324…2.08 mm^2 (22…14 AWG) solid or stranded copper wire rated @ 75 °C (167 °F) or greater 3/64 inch (1.2 mm) insulation maximum
Conductor category[1]	2 – on power ports

(1) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1, for more information.

Environmental Specifications

Attribute	Value
Temperature, operating	IEC 60068-2-1 (Test Ad, operating cold), IEC 60068-2-2 (Test Bd, operating dry heat), IEC 60068-2-14 (Test Nb, operating thermal shock): -20 °C ≤ Ta ≤ +55 °C (-4 °F ≤ Ta ≤ +131 °F)
Temperature, storage	IEC 60068-2-1 (Test Ab, unpackaged nonoperating cold), IEC 60068-2-2 (Test Bb, unpackaged nonoperating dry heat), IEC 60068-2-14 (Test Na, unpackaged nonoperating thermal shock): -40…+85 °C (-40…+185 °F)
Temperature, surrounding air, max	55 °C (131 °F)
Relative humidity	IEC 60068-2-30 (Test Db, unpackaged nonoperating damp heat): 5…95% noncondensing
Vibration	IEC60068-2-6 (Test Fc, operating): 5 g @ 10…500 Hz
Shock, operating	IEC 60068-2-27 (Test Ea, unpackaged shock): 30 g
Shock, nonoperating	IEC 60068-2-27 (Test Ea, unpackaged shock): 50 g
Emissions	IEC 61000-6-4