GE Fanuc IC694PWR331

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Rx3i PacSystem

Power Supply 24 Vdc High Capacity. IC694P IC694PW IC694PWR

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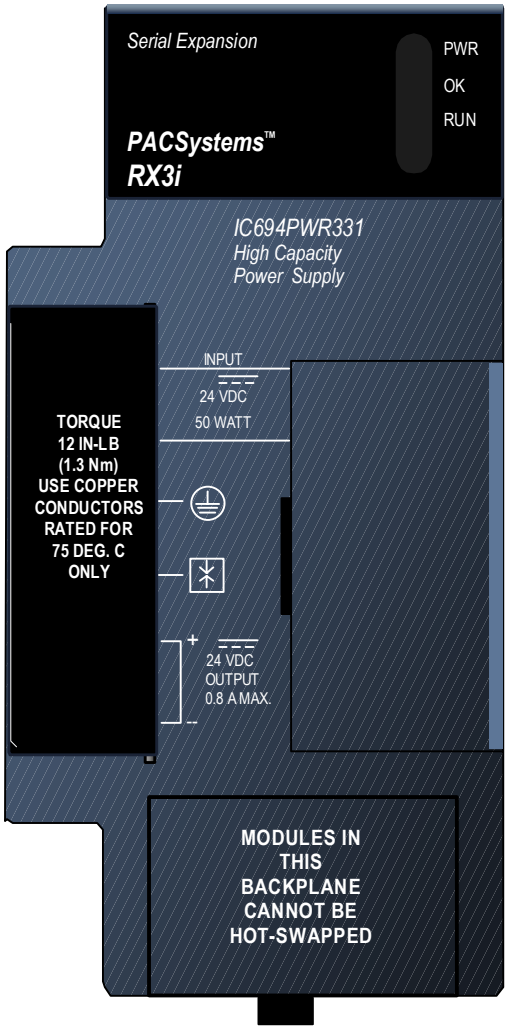
Power Supply, 24 VDC High-Capacity: IC694PWR331

High Capacity Power Supply IC694 PWR331 is rated for 30 Watts output. For applications requiring greater +5 VDC current capacity than is available with a standard supply (PWR321), a High-Capacity Power Supply allows all 30 watts to be consumed from the +5 VDC supply. This supply can operate from an input voltage source in the range of 12 VDC to 30 VDC. Although it is capable of maintaining all outputs within specifications with input voltages as low as 12 VDC, it requires an initial input voltage of 18 VDC to start up.



PWR331 Power supplies provide the following outputs:

- +5 VDC output
- Relay +24 VDC, which provides power to circuits on Output Relay modules
- Isolated +24 VDC, which is used internally by some modules, can also be used to provide external power for 24 VDC Input modules

Power Supply IC694PWR331 must be installed in an Expansion backplane in an RX3i system. The battery backup and serial port functions are not available in Expansion Backplanes.

LEDs

The green PWR LED shows the operating state of the Power Supply. PWR is ON when the Power Supply has a correct source of power and is operating properly. It is OFF when a Power Supply fault occurs or power is not applied.

The green OK LED is steady ON if the PLC is operating properly. It is OFF if a problem is detected by the PLC.

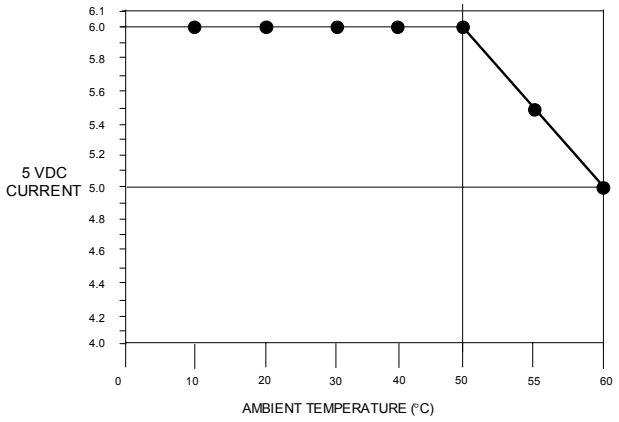
The green RUN LED is ON when the PLC is in Run mode.

Specifications: IC694PWR331

Nominal Rated Voltage **Input Voltage Range** **Start** **Run**	24 VDC 18 VDC to 30 VDC 12 VDC to 30 VDC
Input Power **Inrush Current**	50 Watts maximum at full load 4 Amps peak, 100 milliseconds, maximum
Output Power	5 VDC: 30 Watts maximum * 24 VDC Relay: 15 Watts maximum 24 VDC Isolated: 20 Watts maximum *NOTE: 30 watts maximum total (all three outputs)*
Output Voltage	5 VDC: 5.0 VDC to 5.2 VDC (5.1 VDC nominal) 24 VDC Relay: 19.2 VDC to 28.8 VDC 24 VDC Isolated: 19.2 VDC to 28.8 VDC
Isolation (input to backplane)	1500 VAC (for 1 minute)
Protective Limits **Overvoltage:** **Overcurrent;**	 5 VDC output: 6.4 VDC to 7 VDC 5 VDC output: 7 Amps maximum
Ride-through Time:	10 ms minimum. This is the length of time the Power Supply maintains valid outputs if the power source is interrupted
Fuse	5 Amps, GE Fanuc part number 44A724627-114 (2). See chapter 2 for more information.

* Derate as shown below at ambient temperatures above 50°C (122°F).

Thermal Derating



Overcurrent Protection

The 5 VDC output is electronically limited to 7 Amps. If an overload (including short circuits) occurs, it is sensed internally and the Power Supply shuts down. The Power Supply continually tries to restart until the overload condition is removed. An internal fuse in the input line is provided as a backup. The Power Supply usually shuts down before the fuse blows. The fuse also protects against internal supply faults.

Calculating Input Power Requirements: PWR331

- Use the following procedure to determine input power requirements for the 24 VDC High Capacity Power Supply:
- Determine total output power load from typical specifications listed for individual modules in this chapter.
- Multiply the output power by 1.5 to determine the input power value.
- Divide the input power value by the operating source voltage to determine the input current requirements
- Use the lowest input voltage to determine the maximum input current
- Allow for start-up surge current requirements
- Allow margins (10% to 20%) for variations

Field Wiring: IC694PWR331

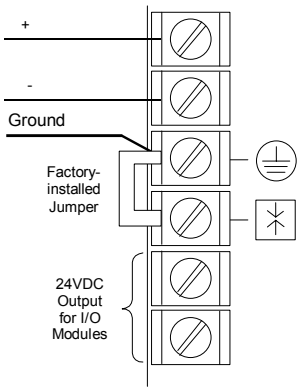
The + wire connects to the top terminal screw, and the - wire connects to the second. These connections are polarity-sensitive for PWR331.

Warning

If the same external DC power source is used to provide power to two or more power supplies in the system, connection polarity must be identical at each power supply. Do not cross the Positive (+) and Negative (-) lines. A resulting difference in potential can injure personnel or cause damage to equipment. Also, each backplane must be connected to a common system ground.

Ground connects to the third screw.

The bottom two terminals of the power supply terminal strip provide connections to the Isolated +24 VDC output. This output can be used to provide power for external circuits (within power limitations of the supply).



Caution

If the Isolated 24 VDC supply is overloaded or shorted, the PLC will stop operation.

Input Overvoltage Protection

Terminal 4 is normally connected to frame ground (terminal 3) with a factory-installed jumper strap. If overvoltage protection is not required or is supplied upstream, this feature can be disabled by removing the jumper.

To Hi-pot test this supply, overvoltage protection must be disabled during the test by removing the terminal strip jumper. Re-enable overvoltage protection after testing by reinstalling the jumper.