24 Volt Power Module Specifications

This table lists the specifications for Model 8311, which is a 24 VDC Power Module.

Table 10 8311 Power Module Specifications

Feature	Description
Isolation	1,000 VAC or 1,500 VDC, Input to Output
Recommended input voltage range	24 VDC, –15% to +20% (protected against reverse connection)
Extended input voltage range[a]	19.2 to 36 VDC
Low line on/off hysteresis	0.1 VDC minimum
Input power required	240 W minimum per power source
Input over-voltage clamp	40 VDC
Input current	
Steady-state	5 amps typical, 10 amps maximum
In-rush	29 amps maximum @ 24 VDC (10 ms)
Input fuse rating and type	15 amps, time-delay
Output voltage	6.5 VDC, ±1%
Output current	27 amps maximum at 140° F (60° C) ambient, which is the air temperature measured at the bottom of the chassis
Output power	175 watts at 140° F (60° C) ambient
Output over-voltage protection	115%, typical, recycle power to restart
Output over-current limit	110%, typical, auto restart
Output hold time @ 0 volts input	2.0 milliseconds minimum; 5.6 milliseconds typical
Over-temperature warning sensor	Temperature monitor trips when the internal power module temperature is greater than 181° F (83° C). Typically, this occurs at an ambient temperature of 140° F (60° C) or higher.

a. During normal operation, you should keep the input power within the recommended input voltage range. Operation in the extended voltage range is advisable only for short periods of time.

Be careful to minimize input transients which are caused by the off/on switching of the redundant power source. Do not allow the power source to drop below the minimum input voltage (19.2 VDC) when its load increases to 100% of the Tricon controller power module requirements, or rise above the maximum voltage (36 VDC) when the load decreases to 40 to 60% of the Tricon controller power module requirements.

For example, assuming minimal voltage losses to the input wiring and a power source of 24V ±5%, the transient response to the power source should not exceed these limits.

Typical Input Current Change	Maximum Input Voltage Deviation
+6A/ms	–3.6 volts
-6A/ms	10.8 volts