DC Power Input Considerations

Steady State Input Range

The 28 VDC input converters were nominally designed to operate from the normal steady state range of MIL-STD-704A through E, but operate over the extended range of 16 to 50 VDC. A surge resistance of 80 VDC is standard for the 28 VDC parts. "V" rated units can withstand the 100 VDC surge of MIL-STD-1275.

The 120 VDC input converters were nominally designed to operate from the normal steady state range of Space Station power, and operate over the extended range of 86 to 158 VDC.

The 270 VDC input converters were nominally designed to operate from the normal steady state range of MIL-STD-704D and E, but operate over the extended steady state range of 200 to 335 VDC. A surge resistance of 440 VDC is standard for the 270 VDC parts.

The 8 to 40 VDC input converters are designed for special low voltage applications, such as low voltage satellite buses. They are not designed to operate from MIL-STD-704 without external limiting circuitry. Surge resistance over 40 VDC is not specified.

For 28 VDC input, the minimum full load output voltage requires an 18 VDC input (due to optimum transformer turns ratios), but operate down to 16 VDC at slightly lighter loads. For converters with an adjustable output voltage or remote sense, a higher output voltage or remote sense voltage recovery will also increase the minimum DC input voltage at full load. Units that operate at lower voltage are available on special order.

Hot and cold temperature extremes can also increase the minimum full load regulation point by several percent due to higher saturation drops or higher voltage.