

DC Power Input Considerations

Turn on Voltage / Load Regulation Effects

At no load conditions at an ambient of 25°C, 28 VDC converters will start to turn on at approximately 11 VDC. The corresponding value for 120 VDC converters is 30-40 VDC. For 270 VDC, the turn on voltage is approximately 80 VDC. For the low voltage 8 to 40 VDC parts, turn on occurs at approximately 9.5 VDC. For 5000 series parts, turn on threshold are the same as other 28 VDC types. For 7000 series parts, turn on occurs at 25 VDC max. For 8000 series parts, turn on occurs at 40 VDC max. For 9000 series parts, turn on occurs at 55 VDC max. There are no constraints on how quickly or how slowly the input voltage is applied. If the input power is applied very slowly (eg., more than several milliseconds), it is recommended that the converter should remain externally inhibited until the power supply input voltage exceeds its minimum rated value. Full regulation at no load can occur at approximately 10 to 20% above the initial start voltage. Between the initial start and reaching the regulation point, the output voltage increases monotonically as the input voltage is increased. External undervoltage lockout circuits are neither necessary nor desirable to control turn-on.