Control Pin Operations

Inhibit/Inhibit Not

Inhibit input for remote turn-on and turn-off, and is referenced to the input return through the negative EMI filter leg as discussed previously. Standard 28 VDC full featured DC-DC Converters have an "inhibit" function. Standard 120 , 270 and 8 to 40VDC full featured DC-DC Converters have an "inhibit not" function. On special order, 28 VDC parts can be supplied with an "inhibit not" function.

An "inhibit" function means that the converter will turn off when a current input is applied to the inhibit pin. The input impedance is 15K ohms in series with a base-emitter junction. A minimum current of 100 microamperes emitter junction. A minimum current of 100 microamperes is recommended to inhibit the converter. To isolate the inhibit pin from effects due to the lower leg of the EMI filter, a minimum compliance voltage of 10 VDC should be used. Do not connect the inhibit pin to ground when not using, just leave this pin open. Connecting the inhibit pin to ground will cause unwanted operation under dynamic input voltage conditions. An optimum external circuit configuration for the inhibit pin is to use a PNP transistor referenced to a positive voltage source, such as the 28 VDC input. An external series resistor may be used on the inhibit pin provided at least 100 microamperes of drive current is achieved.

An "inhibit not" function means that the converter will turn off when the inhibit pin is grounded. Up to 3 milliamperes can flow to ground when the inhibit not pin is brought to zero. The open circuit voltage at the inhibit pin for the inhibit not configuration is approximately 11 VDC. This pin is best driven by an open collector. The transition voltage is approximately 5 VDC. If the inhibit-not function is not used, the pin should be left floating.

Table 3 Inhibit/Inhibit Not	INHIBIT		INHIBIT NOT	
	INPUT	OUTPUT	INPUT	OUTPUT
	OPEN	ON	GROUND	OFF
	+5VDC	OFF	OPEN	ON

Suggested circuits for the inhibit pin interface are shown below.
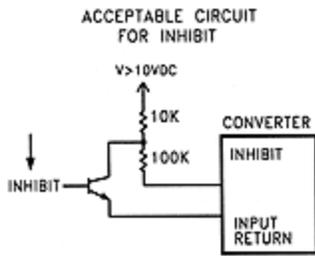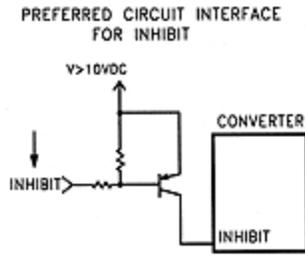
Inhibit Circuits

Figure 7

ACCEPTABLE CIRCUIT
FOR INHIBIT

V>10VDC

10K

100K

INHIBIT

CONVERTER

INHIBIT

INPUT
RETURN

Figure 8

PREFERRED CIRCUIT INTERFACE
FOR INHIBIT

V>10VDC

INHIBIT

CONVERTER

INHIBIT

Figure 9

PREFERRED CIRCUIT INTERFACE
FOR INHIBIT−NOT

INHIBIT

RATED
VCE>20VDC

CONVERTER

INHIBIT

INPUT
RETURN