PowerStream

PST-DCZ0905

DC/DC converter with wide input voltage range and 9VDC 5A output.

Electrical Specifications

Output Voltage
9 VDC ± 0.1 VDC
Maximum steady state input voltage range 8 VDC to 34 VDC
Nominal continuous output current 4.0A Maximum continuous output current with input below 20 VDC 5.0A Line regulation ± 0.5% Load regulation ± 1.0% Minimum input voltage for load regulation of 10 %, see Note 1 7 VDC (1 minute duration)
Maximum output ripple 10mV p-p Maximum switching noise level 90mV p-p Maximum operating temperature range - 40C to 75C (-40F to 167F) Maximum storage temperature range - 40C to 90C (-40F to 194F) Minimum efficiency, see Figure 1 78% 24 VDC input, 0.15A load Maximum efficiency, see Figure 1 89% 12 VDC input, 1.0A load

Protection

Overload protection If there is a short circuit connection or other overload connection is sensed, the unit will automatically limit the output current and, depending on severity, will go into a hiccup mode. See Note 2.
Over temperature protection If an extreme over temperature condition occurs the unit will shut down until the temperature is reduced. See Note 3.
Reverse polarity protection If an in-line 4A fast acting fuse is connected as shown in Figure 2, then the unit will be protected from reverse polarity connection If the fuse is used and there is a reverse polarity connection, the fuse will blow and protect the unit from damage. See Note 4.

Physical Specifications

Weight 108 grams or about 3.8 ounces
Dimensions Length Width Height 120mm (4.73 inches) 55mm (2.17 inches)

33mm (1.30 inches)
Connections Input connector
Output connector 2 position screw terminal block 2 position screw terminal block

Note 1:
Extended operation at voltages less than 8.0 VDC is not recommended although the unit will work at voltages lower than this with reduced load regulation. With voltages lower than 7.0 VDC, load regulation is rapidly reduced.

Note 2:
If an overload is sensed, the unit will automatically limit the output current and reduce the output voltage. If the output voltage is excessively reduced to limit current, the unit will go into a hiccup mode and wait until the overload is removed to restore power. This dual-mode overload protection system allows the unit to be protected from continuous short circuit connection and other overload conditions. Note 3:
Extended operation at temperatures above 75C can damage the unit and will void the warranty.

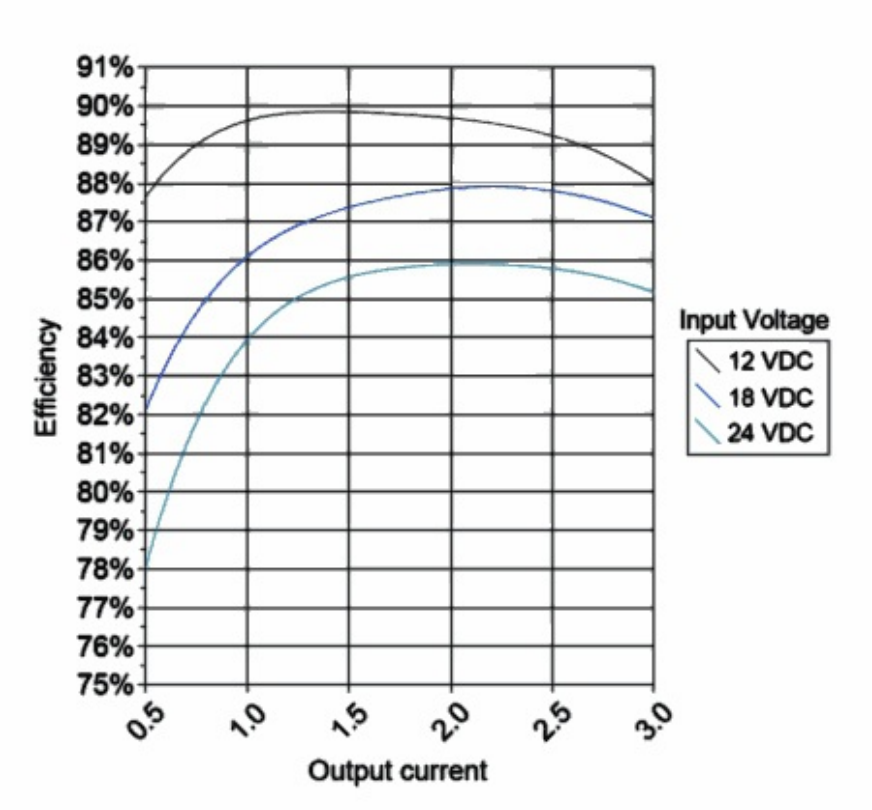


Figure 3 Typical efficiency curves

Note 4:
If the in-line 4A fast-acting fuse is not connected as shown in Figure 2, a reverse polarity connection can damage the unit and will void the warranty.

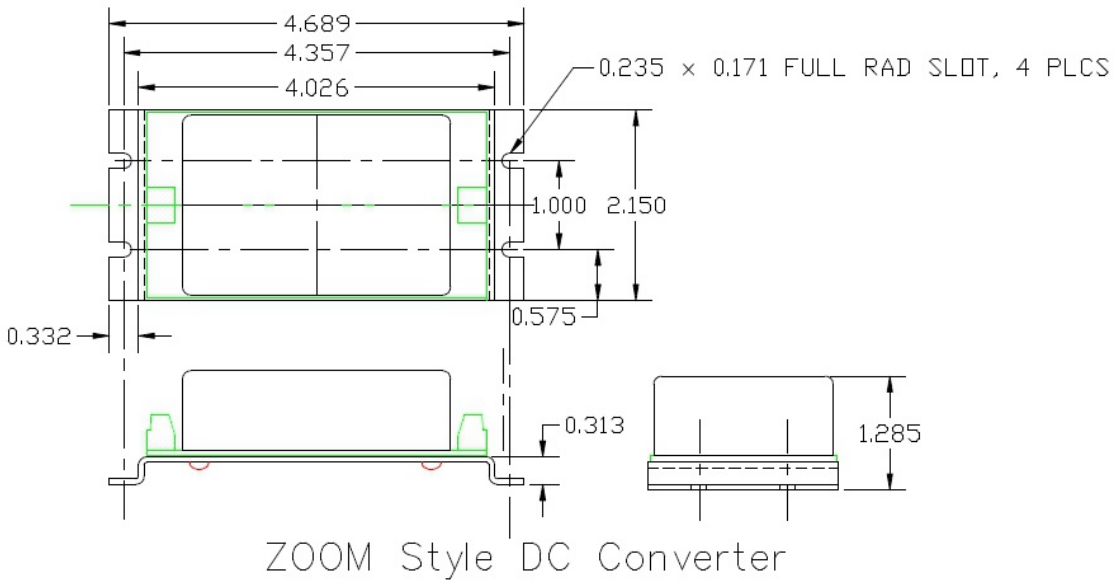
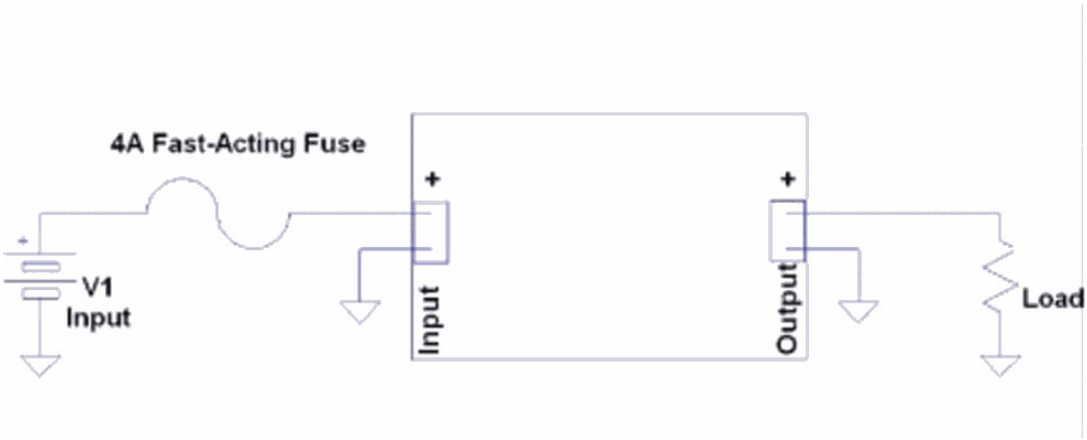


Figure 4. Dimensioned drawing



Connection diagram

Warning: For full warranty protection please use a 4A fast-acting fuse as shown. See Note 4.