



## PST-DCZ1203

### Electrical Specifications

|   |                                |
|---|--------------------------------|
| Output Voltage  | 12 VDC $\pm$ 0.1 VDC           |
| Maximum steady state input voltage range                      | 13.5 VDC to 34 VDC             |
| Maximum continuous output current                             | 3.0A                           |
| Line regulation   | $\pm$ 0.5%                     |
| Load regulation   | $\pm$ 1.0%                     |
| Minimum input voltage for load regulation of 20 %, see Note 1 | 7 VDC (1 minute duration)      |
| Maximum output ripple   | 25mV p-p                       |
| Maximum switching noise level                                 | 90mV p-p                       |
| Maximum operating temperature range                           | - 40C to 65C (- 40F to 149F)   |
| Maximum storage temperature range                             | - 40C to 90C (- 40F to 194F)   |
| Minimum efficiency, see Figure 1                              | 77% 24VDC input, 1.0A load     |
| Maximum efficiency, see Figure 1                              | 88% 12VDC input, 1.0A load     |
| MTBF by MIL calculation, Mobile Installation                  | 69,000hrs minimum, See Note 5  |
| MTBF by MIL calculation, Fixed Installation                   | 128,000hrs minimum, See Note 5 |

### 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 5A 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                        | 120mm (4.73 inches)             |
|             | Width                         | 55mm (2.17 inches)              |
|             | Height                        | 33mm (1.30 inches)              |
| Connections | Input connector               | 2 position screw terminal block |
|             | Output connector              | 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 65C can damage the unit and will void the warranty.

**Note 4:**

If the in-line 5A fast-acting fuse is not connected as shown in Figure 2, a reverse polarity connection can damage the unit and will void the warranty.

**Note 5:**

MTBF calculations are made at maximum rated temperature and maximum rated input voltage. MTBF will be increased with reduced temperature or reduced input voltage.

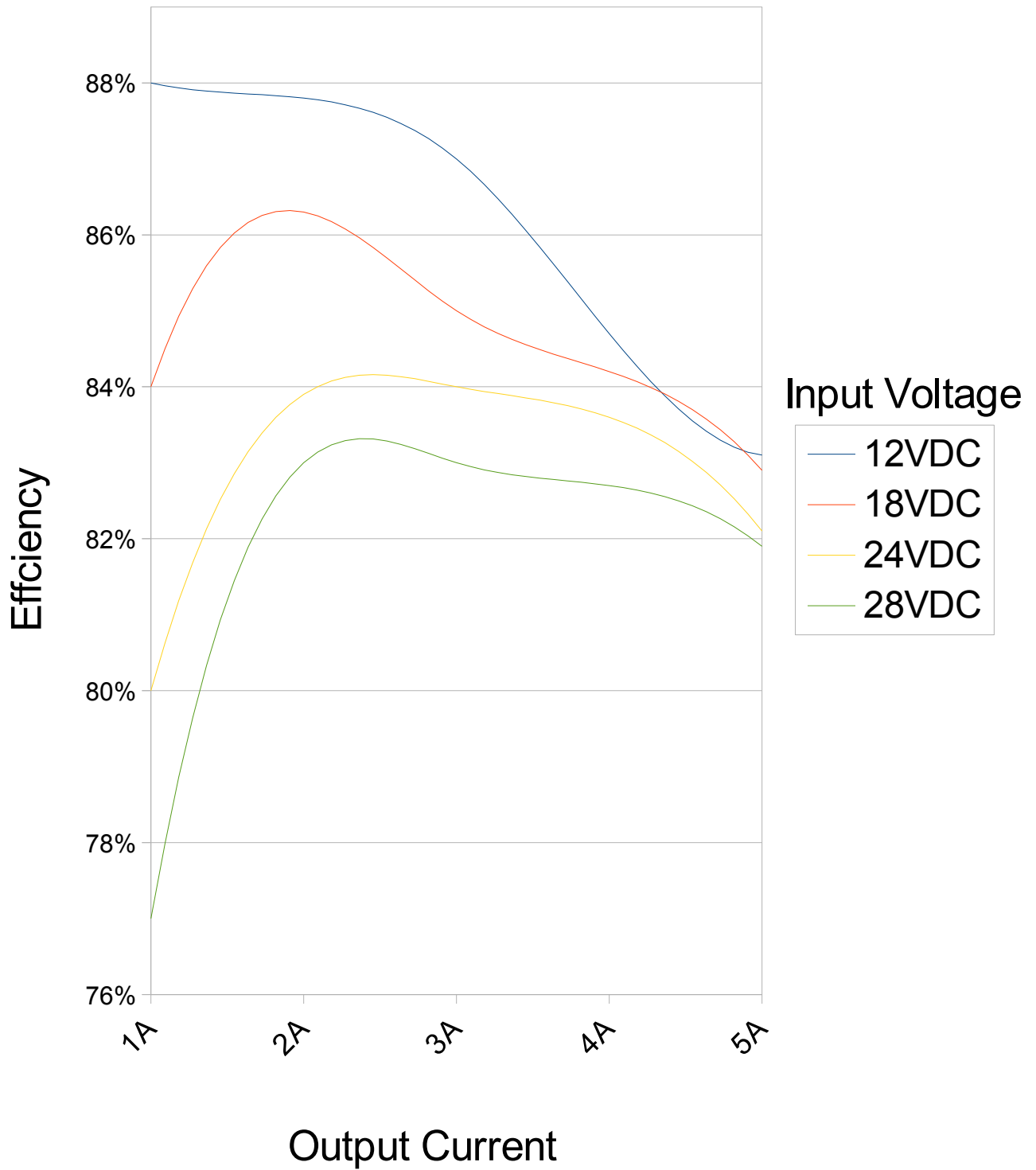


Figure 1

Typical efficiency curves

Figure 2  
Connection diagram

**Warning: For full warranty protection please use a 5A fast-acting fuse as shown.  
See Note 4.**

