



# DC/DC CONVERTER

# MODEL VTC305 SERIES

| Electrical (Input)        |   |  |
|---------------------------|---|--|
| Input Volts (DC)          | 10.5-18   | 10.5-28  |
| Input Amps (max)          | 30  |  |
| Input Fuse (AGC)          | 20 x 2 Amp  |  |
| Noise on Input            | < 25 mV   |  |
| Low Input Voltage Alarm   | 10.5 VDC  |  |
| Current Limit             | 30 Amps in  |  |
| Electrical (Output)       |   |  |
| Output Nominal (op)       | 12  | 24   |
| Output Volts (DC)         | Input - 1V or 13.5 to 17.0<br>Whichever is greater  | Input - 1V or 24.0 to 27.5<br>Whichever is greater |
| Output Current (Amps)     | *27   |  |
| Output Crowbar            | Programmed Output Volts x 1.2   |  |
| Output Ripple & Noise     | < 25 mV   |  |
| Low Output Voltage Alarm  | Programmed Output Voltage minus 2.5 VDC   |  |
| Transient Response        | < 1V for 50% Surge  |  |
| Regulation (Line & Load)  | < +/- 0.5%  |  |
| Duty Cycle                | Continuous 100% for 24 hrs per day  |  |
| Efficiency                | > 90% @ Maximum Output  |  |
| Environment Specification |   |  |
| Operating Temp. Range     | -25° to +40°C @ maximum output<br>Derate Linearly 2.5% per °C from 40°C<br>(Optional -40°C extra wide temp. operation avail.) |  |
| Humidity                  | 0 - 95% Relative Humidity<br>(non-condensing) with optional conformal coating   |  |
| Audible Noise             | NONE Ødb @ 3 ft   |  |
| Typical Service Life      | > 10 yrs. (87,600 hrs)  |  |
| Isolation                 | Any Input or Output to Case 500 VDC<br>Input to Output – Common Negative  |  |
| Mechanical Specification  |   |  |
| Length                    | 9.1 in / 23.1 cm  |  |
| Width                     | 7.8 in / 19.8 cm  |  |
| Height                    | 2.5 in / 6.4 cm   |  |
| Material                  | Marine Grade Aluminium  |  |
| Finish                    | Black Anodize / Powder Epoxy Coat   |  |
| Fastenings                | All 18-8 Stainless Steel  |  |
| Weight                    | 4.0 lb / 1.8 kg   |  |
| Connections               | Four contact output terminals   |  |
| Warranty                  | 3 years   |  |

\* The actual output current capability depends upon the input/output voltage ratio. To obtain the actual output current capability at any given input voltage, use the following formula:

$$\text{Output Amps} = \text{Input Volts} / \text{Output Volts} \times 27$$

For example, at 11 VDC in and 13.6 VDC out, the output current =  $11/13.6 \times 27 = 22.8$  amps



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