



## PM700 SERIES

Single and dual output

Recommended for new design-ins

- 62% typical efficiency
- Low output ripple and noise
- Pi input filter
- No derating
- Short circuit protection
- Meets VDE 0871 level B

This series of general purpose DC/DC converters from Computer Products includes three single output and four dual output models. The PM700 series provides excellent voltage regulation and isolation with low ripple and noise at three Watts output power. These compact modules contain pi input filters to minimise reflected ripple current. Other important specifications include: a minimum efficiency of 61%; line regulation of  $\pm 0.02\%$ ; load regulation of  $\pm 0.04\%$ ; low ripple and noise 10mV pk-pk; 500VDC isolation; and an output voltage accuracy of  $\pm 1.0\%$ .

[ 2 YEAR WARRANTY ]

## SPECIFICATION

All specifications are typical at nominal input, full load at 25°C unless otherwise stated

| OUTPUT SPECIFICATIONS         |                    |                                          |
|-------------------------------|--------------------|------------------------------------------|
| Voltage accuracy              |                    | $\pm 1.0\%$ , max.                       |
| Voltage balance               | Dual output        | $\pm 0.5\%$ , max.                       |
| Line regulation               | Full range         | $\pm 0.02\%$                             |
| Load regulation               | NL to FL           | $\pm 0.04\%$                             |
| Ripple and noise<br>20 MHz BW | Single output      | 10 mV typical,<br>50mV max.              |
|                               | Dual output        | 6 mV typical,<br>35mV max.               |
| Transient response            | NL-FL, All outputs | 200mV peak dev.,<br>10 $\mu$ s recovery  |
|                               | FL-NL, Singles     | 300mV peak dev.,<br>200 $\mu$ s recovery |
|                               | FL-NL, Duals       | 20 $\mu$ s recovery                      |
| Temperature coefficient       |                    | $\pm 0.02\%/^{\circ}\text{C}$ , max.     |
| Short circuit protection      |                    | Automatic restart,<br>8 hours max.       |
| INPUT SPECIFICATIONS          |                    |                                          |
| Input voltage range           |                    | See table on<br>facing page              |
| Input filter                  | See Note 3         | Pi network                               |

| ELECTROMAGNETIC COMPATIBILITY SPECIFICATIONS |                      |                                    |
|----------------------------------------------|----------------------|------------------------------------|
| Conducted noise                              | EN55022, EN55011     | VDE0871 Level B                    |
| GENERAL SPECIFICATIONS                       |                      |                                    |
| Efficiency                                   | FL and nominal input | 61%, min.                          |
|                                              | FL and nominal input | 62%, typical                       |
| Isolation voltage                            |                      | 500VDC, min.                       |
| Switching frequency                          |                      | 20kHz, min.                        |
| Case material                                |                      | Non-conductive<br>black plastic    |
| Weight                                       |                      | 57g (2oz.)                         |
| MTBF                                         |                      | 680,000 Hours                      |
| ENVIRONMENTAL SPECIFICATIONS                 |                      |                                    |
| Thermal performance                          | Operating ambient    | -25°C to +71°C                     |
|                                              | Non-operating amb.   | -40°C to +125°C                    |
|                                              | Case                 | +95°C max                          |
|                                              | Derating             | None                               |
|                                              | Cooling              | Free air convection                |
| Relative humidity                            | Non-condensing       | 20% to 80% RH                      |
| Altitude                                     | Operating            | 10,000 feet max.                   |
|                                              | Non operating        | 40,000 feet max.                   |
| Vibration                                    |                      | 2.5G rms (approx.)<br>5Hz to 500Hz |

## 3 Watt Nominal input DC/DC converters

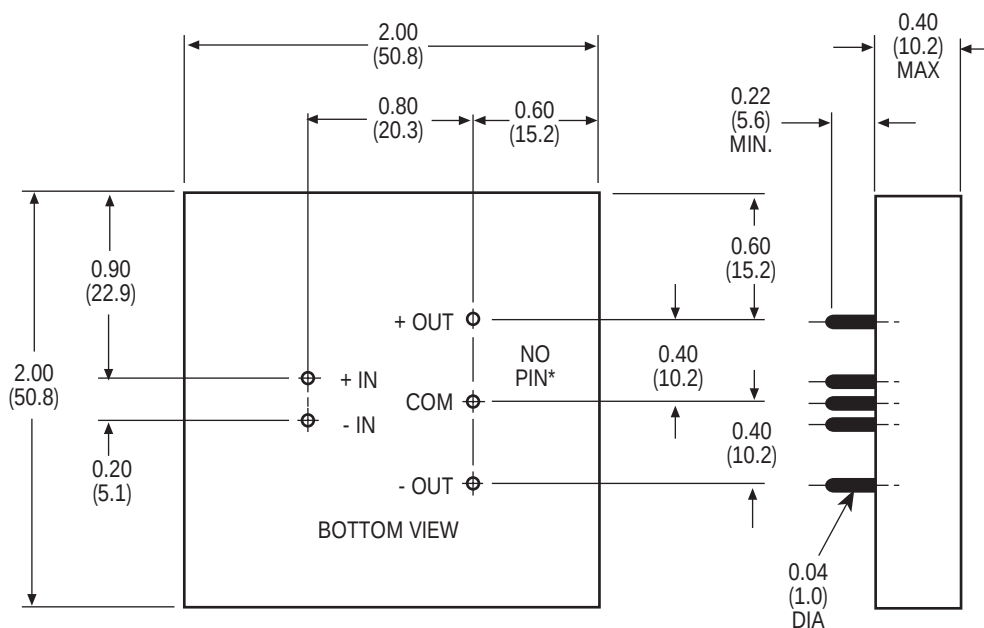
| INPUT<br>VOLTAGE | OUTPUT<br>VOLTAGE | OUTPUT<br>CURRENT | INPUT CURRENT |           | REFLECTED<br>RIPPLE CURRENT (1) | REGULATION |        | MODEL<br>NUMBER |
|------------------|-------------------|-------------------|---------------|-----------|---------------------------------|------------|--------|-----------------|
|                  |                   |                   | NO LOAD       | FULL LOAD |                                 | LINE       | LOAD   |                 |
| 5VDC             | 5VDC              | 600mA             | 125mA         | 935mA     | 32mA pk-pk                      | ±0.02%     | ±0.04% | PM701           |
| 5VDC             | ±15VDC            | ±100mA            | 135mA         | 955mA     | 33mA pk-pk                      | ±0.02%     | ±0.02% | PM752           |
| 12VDC            | 5VDC              | 600mA             | 50mA          | 364mA     | 24mA pk-pk                      | ±0.02%     | ±0.04% | PM711           |
| 12VDC            | ±15VDC            | ±100mA            | 55mA          | 376mA     | 24mA pk-pk                      | ±0.02%     | ±0.02% | PM762           |
| 24VDC            | 5VDC              | 600mA             | 25mA          | 163mA     | 22mA pk-pk                      | ±0.02%     | ±0.04% | PM721           |
| 24VDC            | ±12VDC            | ±125mA            | 25mA          | 170mA     | 23mA pk-pk                      | ±0.02%     | ±0.02% | PM771           |
| 24VDC            | ±15VDC            | ±100mA            | 30mA          | 168mA     | 22mA pk-pk                      | ±0.02%     | ±0.02% | PM772           |

### Notes

- Figures are peak to peak.
- Standard specifications are conservative and can be optimised for specific applications. In particular, converter start-up at lower than specified temperature, wider input voltage range and output voltage adjustment are all relatively simple modifications to the standard product. Consult factory for details.
- Fixed frequency design provides for easier input filtering and better noise performance.

| INPUT<br>VOLTAGE | 60% FL         | 80% FL        | 100%FL         |
|------------------|----------------|---------------|----------------|
| 5V               | 4.4 to 6.5V    | 4.5 to 6.0V   | 4.65 to 5.5V   |
| 12V              | 10.56 to 15.6V | 10.8 to 14.4V | 11.16 to 13.2V |
| 24V              | 21.12 to 31.2V | 21.6 to 28.8V | 22.32 to 26.4V |

### Standard Pin Configuration



ALL DIMENSIONS IN INCHES (mm)

\* NO PIN ON SINGLE MODELS