

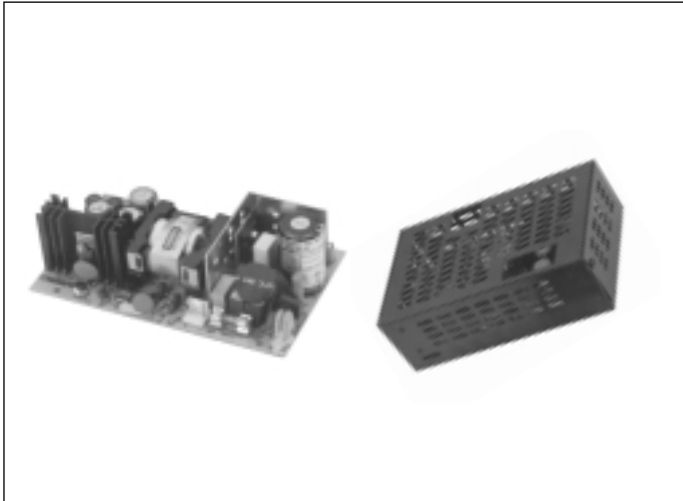
# DC/DC Converters

**XPiQ inc.**

Intelligent Design Quality Product



**65 Watts**  
**PD65 Series**



- Low Cost
- 100% Burn-In
- Small Size, Light Weight
- Three Wide Input Voltage Ranges  
10-30 VDC, 20-60 VDC, 30-90 VDC
- Overvoltage Protection
- Overcurrent Protection

## Specification

All specifications typical at nominal line, full load and 25°C

### Input

- |                      |   |
|----------------------|---|
| <i>Input Voltage</i> | • 10 to 30 VDC<br>(PD65 "L" series)<br>20 to 60 VDC<br>(PD65 "M" series)<br>30 to 90 VDC<br>(PD65 "H" series) |
| <i>Input Current</i> | • 4.1A (rms) for 24 VDC<br>2.1A (rms) for 48 VDC<br>1.5A (rms) for 72 VDC                                     |

### Output

- |                                     |   |
|-------------------------------------|---|
| <i>Output Voltage/<br/>Current</i>  | • See rating chart  |
| <i>Ripple</i>                       | • 1% peak to peak maximum   |
| <i>Overvoltage<br/>Protection</i>   | • Provided on output #1 only,<br>set at 112-132% of its nominal<br>output voltage |
| <i>Overcurrent<br/>Protection:</i>  | • All outputs protected in short<br>circuit conditions                            |
| <i>Temperature<br/>Coefficient:</i> | • All outputs $\pm 0.04\%/^{\circ}\text{C}$ maximum                               |

### General

- |                          |                                 |
|--------------------------|---------------------------------|
| <i>Efficiency</i>        | • 65% - 80%                     |
| <i>Hold-up time</i>      | • 10 msec                       |
| <i>Line Regulation</i>   | • $\pm 0.5\%$ max.              |
| <i>Isolation Voltage</i> | • 1000 VDC from input to output |

### Environmental

- |                                  |   |
|----------------------------------|---|
| <i>Operating<br/>Temperature</i> | • 0°C to +70°C*                           |
| <i>Storage<br/>Temperature</i>   | • -40°C to +85°C                          |
| <i>MTBF</i>                      | • 100,000 hours                           |
| <i>Weight</i>                    | • 380 grams - PCB<br>640 grams - enclosed |

\* Derate linearly from 100% load at 50°C to 50% load at 70°C

# OUTPUT VOLTAGE & CURRENT RATINGS

PD 65

| Model   | Output #1 |      |                  |      | Output #2 |      |                  |      | Output #3 |      |                  |      | Output #4 |      |                  |      | Maximum Output Power <sup>2</sup> |
|---------|-----------|------|------------------|------|-----------|------|------------------|------|-----------|------|------------------|------|-----------|------|------------------|------|-----------------------------------|
|         | Vnom      | Imin | I <sub>max</sub> | Tol. | Vnom      | Imin | I <sub>max</sub> | Tol. | Vnom      | Imin | I <sub>max</sub> | Tol. | Vnom      | Imin | I <sub>max</sub> | Tol. |                                   |
| PD65-10 | 5V        | 0.0A | 10A              | 1%   |           |      |                  |      |           |      |                  |      |           |      |                  |      | 65W                               |
| PD65-12 | 12V       | 0.0A | 5.5A             | 1%   |           |      |                  |      |           |      |                  |      |           |      |                  |      | 65W                               |
| PD65-13 | 15V       | 0.0A | 4.5A             | 1%   |           |      |                  |      |           |      |                  |      |           |      |                  |      | 65W                               |
| PD65-14 | 24V       | 0.0A | 3.0A             | 1%   |           |      |                  |      |           |      |                  |      |           |      |                  |      | 65W                               |
| PD65-25 | +5V       | 1.0A | 6.0A             | 3%   | +24V      | 0.3A | 2.0A             | 5%   |           |      |                  |      |           |      |                  |      | 65W                               |
| PD65-30 | +5V       | 1.0A | 6.0A             | 3%   | +12V      | 0.5A | 3.0A             | 5%   | +24V      | 0.1A | 0.5A             | 10%  |           |      |                  |      | 65W                               |
| PD65-31 | +5V       | 1.0A | 6.0A             | 3%   | +12V      | 0.5A | 3.0A             | 5%   | +12V      | 0.1A | 0.5A             | 10%  |           |      |                  |      | 65W                               |
| PD65-32 | +5V       | 1.0A | 6.0A             | 3%   | +15V      | 0.4A | 3.0A             | 5%   | +12V      | 0.1A | 0.5A             | 10%  |           |      |                  |      | 65W                               |
| PD65-40 | +5V       | 1.0A | 6.0A             | 3%   | +12V      | 0.5A | 3.0A             | 5%   | -12V      | 0.1A | 0.5A             | 10%  | -5V       | 0.1A | 0.5A             | 10%  | 65W                               |

## Notes

- All multi-output units may be operated at no load without damage. At no load, output tolerance increases to 10%.
- Maximum output power for 10-30 VDC input range is 70% of that shown above.
- Suffix codes for mechanical format and input range as follows:  
 Input voltage range    L: 10-30 VDC<sup>2</sup>    Mechanical format:    A: PCB only  
                                   M: 20-60 VDC                                   C: Enclosed  
                                   H: 30-90 VDC

Example: PD65-31MC (20-60 VDC input range/Enclosed).

## Pin Chart

| MODEL              | PIN                | 1         | 2         | 3             | 4             | 5         | 6         | 7         | 8         |
|--------------------|--------------------|-----------|-----------|---------------|---------------|-----------|-----------|-----------|-----------|
| PD65-10<br>PD65-13 | PD65-12<br>PD65-14 | OUTPUT #1 | OUTPUT #1 | OUTPUT #1     | OUTPUT #1     | RETURN    | RETURN    | RETURN    | RETURN    |
| PD65-25            |                    | OUTPUT #1 | OUTPUT #1 | COMMON RETURN | COMMON RETURN | OUTPUT #2 | OUTPUT #2 | N.C.      | N.C.      |
| PD65-30<br>PD65-32 | PD65-31            | OUTPUT #1 | OUTPUT #1 | COMMON RETURN | COMMON RETURN | OUTPUT #2 | OUTPUT #2 | OUTPUT #3 | N.C.      |
| PD65-40            |                    | OUTPUT #1 | OUTPUT #1 | COMMON RETURN | COMMON RETURN | OUTPUT #2 | OUTPUT #2 | OUTPUT #3 | OUTPUT #4 |

## Mechanical Details

