

## General specifications

### PDP series - 650W open frame power supply for plasma display monitors

Magnetek's PDP Power Supply Series is designed for superior performance in plasma display panel monitors and TV systems. The design based on resonant topology solution allows a very low noise level.

The unit is open frame and supplies full rated output power over the whole input voltage range from 90 to 264Vac.

The very high efficiency (>92%) as well as the compact size (max. height 40mm) position this family to the top of the market performance.

PDP series consists of three models: 650W; 500W and 400W open frame power supplies

#### Key features of the PDP series include:

- Universal AC Input, PFC 0.99 according to EN61000-3-2, Immunity Standard EN61000.
- Very high efficiency: > 92% at 220V<sub>in</sub>
- Class B conducted and radiated emission EN55022
- Input power meets *Blu Angel* and *Energy Star* requirements
- 5V 0.5A auxiliary stand-by output voltage
- Remote ON/OFF signal TTL compatible
- No minimum load required
- Very compact size (height): 40mm (1.57")
- Natural convection - no fan needed
- Certified according to EN60950, UL1950, CSA 22.2, IEC60950 standards; CE certified

#### 650W Model Summary and ordering code

Model Number	P/N MagneTek	
PDP-650W	3C549930000	

#### Input characteristics

**Input frequency:** 47-63 Hz

**Input Voltage Range:** 90-264Vac (full output power).

**Input current:** 7.3A @ 100Vac; 3.2A @ 220Vac

**Inrush current (peak):** < 50A

**Power Factor:** 0.99 at 110V, (P<sub>nom</sub>)

**Under voltage level:** shut down at 80Vac (auto-restart when input voltage arise to 90Vac.)

**Input AC Fuse:** UL R/C component 15A (650W); 10A (500W and 400W)

**Input Leakage Current:** 0.75mA 264V at 60Hz

**Input Line Harmonics:** According to EN61000-3-2 (Class D limits)  
**Ripple and Noise:** < 0.5%

#### Output characteristics

**Turn on delay:** <1 sec from AC applied

**Output Rise Time :** 50ms max.( except V<sub>1</sub> and V<sub>2</sub>)

**Output MAX Power:** max continuous, 1000W peak power

**Over Voltage Protection:** Latch-Mode Type

**Auxiliary output:** 5.0Vdc

**Auxiliary output current:** 0.5A (I<sub>max</sub>)

Output Name	Output Voltage (Nom)	Output Current Min /Max / Peak	Output Range Regulation	Overall Output Regulation (Line,Load)	Over Voltage Limit	Overcurrent Protection
V <sub>1</sub>	+85Vdc	0.1A /5.5A /8.0A	+/-10V	+/-2%	95V to 100V	8A to 9A, constant current, auto-recovery
V <sub>2</sub>	+75Vdc	0.1A /1.5A /3.0A	60V-80V	+/-2%	85V to 100V	3A to 4A, constant current, auto-recovery
V <sub>3</sub>	+80Vdc	0.01A /0.2A /0.5A	+/-10V	+/-2%	-	Short circuit protection
V <sub>4</sub>	+80Vdc	0.01A /0.1A /0.3A	75V-110V	+/-2%	-	Short circuit protection
V <sub>5</sub>	+115Vdc	0.01A /0.1A /0.3A	+/-15V	+/-5%	-	Short circuit protection
V <sub>6</sub>	+15Vdc	0.1A /1.0A /2.0A	Fixed	+/-5%	19V	Short circuit protection
V <sub>7</sub>	+6Vdc	0.1A /0.4A /1.0A	Fixed	+/-2%	7V-	Short circuit protection
V <sub>8</sub>	+6Vdc	0.01A /0.4A /0.5A	Fixed	+/-2%	7.5V	Short circuit protection
V <sub>9</sub>	+5Vdc	0.2A /1.3A /3.0A	5V-7V	+/-2%	8.7V	Short circuit protection
V <sub>10 aux.st.by</sub>	+5Vdc	0.01A /0.5A	Fixed	+/-2%	6.0 to 6.5V	Short circuit protection
V <sub>11</sub>	+12Vdc	0.01A /0.5A /1.0A	Fixed	+/-5%	16.5V	Short circuit protection
V <sub>12</sub>	+12Vdc	0.01A /0.3A /0.5A	Fixed	+/-5%	16.5V	Short circuit protection
V <sub>13</sub>	+12Vdc (GND Isolated)	0.01A /1.5A /3.0A	Fixed	+5% / -7%	16.5V	Short circuit protection
V <sub>14</sub>	+3.3Vdc	0.3A/3.0A /5.2A	Fixed	+/-4%	4V	Short circuit protection
V <sub>15</sub>	+33.0Vdc	0.001A/0.003A /0.003A	Fixed	+/-10%	-	Short circuit protection

**General characteristics**

**Efficiency, max:** >92% at 220V, full load

**Efficiency, min:** 90% at 100V, full load

**Over Temperature Protection Threshold:**

- Catastrophic threshold at 110°C (measured on heatsink)
- Programmable threshold (under proper application requirement).

**Isolation:**

- Input-Output: 3.0KVac
- Input-Chassis (1 minute): 1.5KVac

**Weight:** Kg 2,89

**Dimensions (WxHxD):**

- **PCB1:** 9.64" (245mm) x 1.57" (40mm) x 9.64"(245mm)
- **PCB2:** 9.64" (245mm) x 1.57" (40mm) x 15.55"(395mm)

**Operating Temperature:** -20 to +60°C.

**Storage Temperature:** -40 to +80°C

**Relative Humidity Range:**

- 10 to 90% @60°C (operating condition)
- 55 to 95% @75°C (non-operating condition)

**Cooling:** natural Convection when the power supply is assembled with the fins of the heatsink in vertical orientation. For other orientations an external airflow of 100 LFM must be provided.

**EMC Conducted and Radiated:** According to EN 55022 Class B

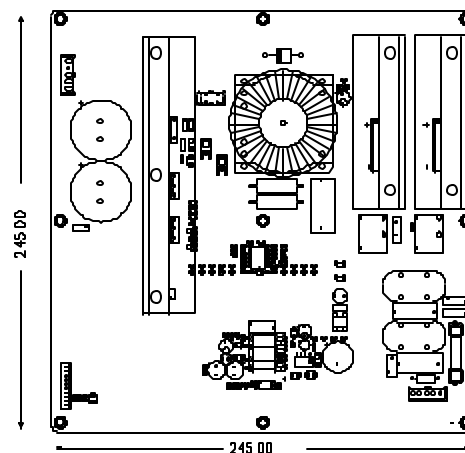
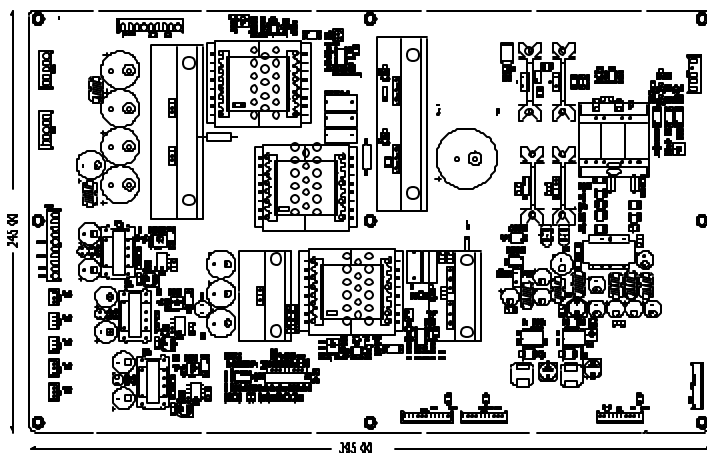
**EMI:** EN61000-4-6 (conducted) EN61000-4-3 (radiated) (Level 3 10V/m)

**ESD:** EN61000-4-4 Level 3, IEC61000-4-5 Class 3

**Lighting, Surge, Transient:** EN61000-4-4 Level 3, IEC61000-4-5 Class 3

**MTBF:** 150000 hours at 25°C

**Mechanical drawings**



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