ENERMAX
POWER. INNOVATION. DESIGN.

MODU87+ Power Supply Series

MODU 87+

500W/600W/700W/800W/900W

Features

80PLUS® Gold
87 to 93 percent efficiency @ 230V and 20 to 100 percent load. 80PLUS® Gold certified.

Dynamic Hybrid Transformer Topology
Technological breakthrough topology using a staged dynamic transformer array for extremely high efficiency with the most durable and stable output at any load.

Intel ATX12V v2.3
Compliant with latest desktop power supply design guide. Full support of most current CPU: Intel® Core 2 Duo™ / Quad™ / Extreme™ / i7™ / i5™ / i3™ and AMD® Athlon™ 64X2/X4 or Phenom™ X3/X4.

Stable and reliable power
Up to four high-performance and massive 12V rails. Extremely low ripple noise.

Future ready and flexible
All-round modular cable management. 10/12P sockets for possible connector changes of upcoming high-performance CPU and graphics card generations.

DXXI ready!
Full support of most current DX11 graphics cards due to minimum two 6+2P (8P) PCI-E connectors.

Full graphics power
Supports SLI™ and CrossFireX™ systems.

C6 & Hybrid Support
Supports energy saving modes of current and future CPU & GPU generations (C6 & Hybrid Mode) due to ZERO LOAD Design (no minimum load).

Fit4Server (only Modu87+ 800W/900W)
SSI PSDG 2009 Support for latest Intel® and AMD® processors. Downward compatible with SSI PSDG 2008 1.0, EPS12V 2.92, 2.91 and 2.8.

Air Cooling by Enermax
Integrated 13.9cm fan with patented Twister Bearing Technology ensures efficient and ultra silent cooling and long lifetime (100,000 hours MTBF).

SpeedGuard
Unmatched 330RPM at low loads. Path breaking and leading patented fan control for optimal cooling and minimum noise (Modu87+ 800W/900W: 700-1,800 RPM).

HeatGuard
Keeping PSU fan running for 30-60 seconds after shut down to dissipate the remaining system heat and prolonging system lifetime.

Hybrid Capacitor Array
High-performance capacitor array of heavy-duty solid state capacitors and Japanese electrolytic capacitors to ensure tightest DC stability and regulation.

SafeGuard
Industry-leading octuple protection circuitry of OCP, OVP, AC UVP, DC UVP, OPP, OTP, SCP & SIP.

CordGuard
Fixing the AC cord tightly to avoid accidental shutdowns of your PC.

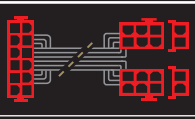
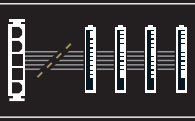
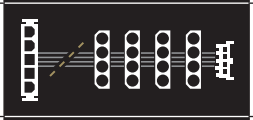
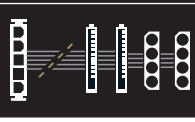
Non-stop @ 50°C
Non-Stop industrial class performance at 50°C ambient.

Worldwide Compatibility
100-240V AC input with automatic adjustment and up to 99% active Power Factor Correction (PFC) for global usage.

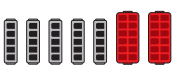
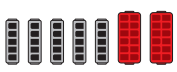
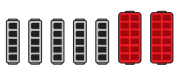
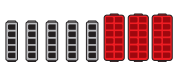
Dimensions (W x H x D) 500 / 600 / 700W: 150mm x 86mm x 160mm, 800W / 900W: 150mm x 86mm x 175mm

5 years vendor warranty

Cables & Connectors

			500W	600W	700W	800W	900W
NATIVE	**ATX12V 24 Pin**		**1x** 55cm	**1x** 55cm	**1x** 55cm	**1x** 55cm	**1x** 55cm
	CPU 4+4 Pin		**1x** 60cm	**1x** 60cm	–	**1x** 60cm	**1x** 60cm
	CPU 8 Pin		–	–	–	**1x** 60cm	**1x** 60cm
	CPU 4+4 Pin & 8 Pin		–	–	**1x** 60 / 60cm	–	–
	2x PCI-E 2.0		–	–	–	**1x** 45 / 45cm	**1x** 45 / 45cm
MODULAR	**EMC014-G** 2x PCI-E 2.0 6+2 Pin		**1x** 55 / 55cm	**2x** 55 / 55cm	**2x** 55 / 55cm	**2x** 50 / 50cm	**2x** 50 / 50cm
	EMC019-G 4x SATA		**1x** 45 / 60 / 75 / 90cm	**1x** 45 / 60 / 75 / 90cm	**1x** 45 / 60 / 75 / 90cm	**2x** 45 / 60 / 75 / 90cm	**2x** 45 / 60 / 75 / 90cm
	EMC020-G 4x 4 Pin Molex + FDD		**1x** 45 / 60 / 75 / 90 / 105cm	**1x** 45 / 60 / 75 / 90 / 105cm	**1x** 45 / 60 / 75 / 90 / 105cm	**1x** 45 / 60 / 75 / 90 / 105cm	**1x** 45 / 60 / 75 / 90 / 105cm
	EMC021-G 2x SATA + 2x 4 Pin Molex		**1x** 45 / 60 / 75 / 90cm	**2x** 45 / 60 / 75 / 90cm	**2x** 45 / 60 / 75 / 90cm	**2x** 45 / 60 / 75 / 90cm	**2x** 45 / 60 / 75 / 90cm

Specifications

	EMG500AWT		**EMG600**AWT		**EMG700**AWT		**EMG800**EWT		**EMG900**EWT	
AC Input Rating										
Input Voltage	100-240VAC, 50-60Hz, Active PFC									
Input Current	6.5–3A		8–3.5A		9–4A		10–4.5A		11.5–5A	
DC Output Rating										
+3.3V	20A	100W	24A	120W	24A	120W	24A	120W	24A	120W
+5V	20A		24A		24A		24A		24A	
+12V1	25A	492W (41A)	25A	600W (50A)	25A	696W (58A)	30A	792W (66A)	30A	900W (75A)
+12V2	25A		25A		25A		30A		30A	
+12V3	25A		25A		25A		30A		30A	
+12V4	-	-	-	-	-	-	30A		30A	
-12V	0.5A	6W	0.5A	6W	0.5A	6W	0.5A	6W	0.5A	6W
+5Vsb	3A	15W	3A	15W	3A	15W	3A	15W	3A	15W
Total Power	**500W**		**600W**		**700W**		**800W**		**900W**	
Peak Power	**550W**		**660W**		**770W**		**880W**		**990W**	
Modular cable management										

Dynamic Hybrid Transformer Topology (DHT)

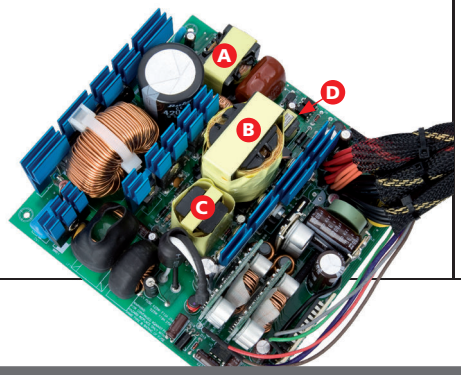
All current options for further improvement of the PSU DC stage have been exhausted. For this reason, PSU manufacturers focus on the development of more efficient AC technologies. With the so-called “Dynamic Hybrid Transformer Topology” Enermax made the breakthrough: It is based on three pathbreaking innovations:

DYNAMIC HYBRID TRANSFORMER TOPOLOGY

DYNAMIC RESONANT TRANSFORMER ARRAY

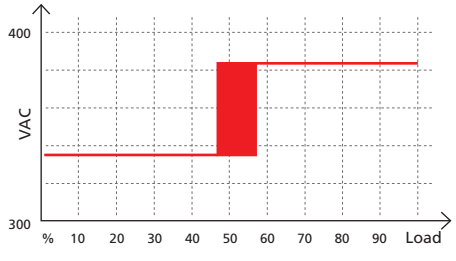
Enermax implemented a so-called Dynamic Resonant Transformer Array. It is based on the high-efficient resonant topology which is used for example in LCD monitors. The most noticeable modification on PCB is an additional resonant choke.

A RESONANT CHOKE
B MAIN TRANSFORMER
C DRIVER TRANSFORMER
D STANDBY TRANSFORMER



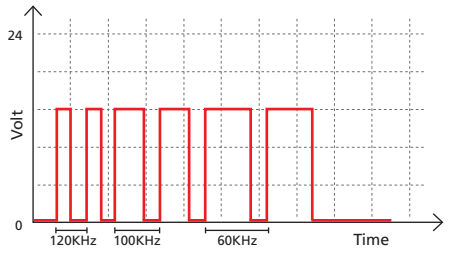
DYNAMIC VOLTAGE BOOSTING TRANSFORMING

Initially, the capacitors are charged with alternating current (AC) from the wall socket. They ensure the continuous AC supply of the transformers according to the DC consumption of the PC system. Up to now, capacitors have been charged statically, so that too much power got lost at low loads. The capacitors of Modu87+/Pro87+ series are charged with dynamic voltages – according to the required system power. That way, Enermax is able to increase the efficiency significantly.

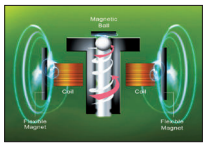


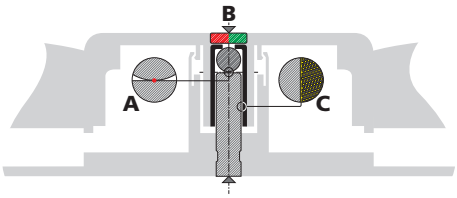
DYNAMIC FREQUENCIES TRANSFORMING

Transformers step the alternating current up or down. During this operation a part of the input power gets lost. Enermax managed to optimize the AC-to-DC conversion by the use of dynamic frequencies. The transformers work with a wider frequency range according to the variable power consumption of system components. That way, Enermax is able to reduce energy losses during AC-to-DC conversion radically.



Twister Bearing Technology





A **Minimal contact area**
For an effective noise reduction

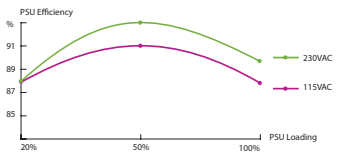
B **Rotor with integrated magnet**
For a frictionless and smooth motion

C **Self-lubricating bearing sleeve**
Abrasion protection for a longer lifetime

Twister Bearing Technology (patented)
Persistent low noise level. Longer life: up to 100.000 hours MTBF

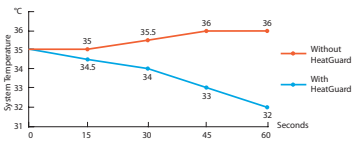
80PLUS® GOLD

Up to 93% efficiency at 230V



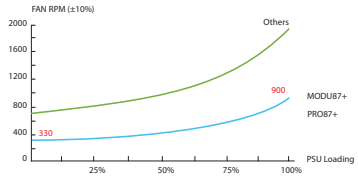
Leading technology for highest PSU efficiency.

HeatGuard



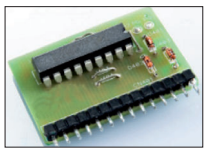
Keeping PSU fan running for 30-60 seconds after shut down to dissipate the remaining system heat.

SpeedGuard



Unmatched 330RPM at low loads (Modu87+ 800W / 900W: 700-1.800RPM).

SafeGuard



Industry-leading octuple protection circuitry of OCP, OVP, AC UVP, DC UVP, OPP, OTP, SCP & SIP.

Certifications & Standards

Tested To Comply With FCC Standards FOR HOME OR OFFICE USE

E134014

AR46

R43028