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Specifications Sheet

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P/N: PSU-1000ATX-12N

Koolance 1000W Liquid-Cooled Power Supply



The Koolance PSU-1000ATX-12N provides 1000W of continuous output in a smaller and lighter profile than the PSU-1300ATX-12N. Completely flooded in a special non-conductive cooling liquid, the fan-less PSU-1000ATX-12N is superior to even "partly" water cooled and heat pipe power supplies.

Heat Transfer Method

Featuring a compact liquid-to-liquid heat exchanger developed exclusively by Koolance, the PSU-1000ATX-12N provides the most efficient heat transfer available among any ATX power supply. Heat from *each* component is dumped directly into an internally circulating non-conductive liquid, through the heat exchanger, and out to an existing water cooling system. Thus, liquids are kept completely separate and normal cooling fluid can be used with the PSU-1000ATX-12N.

The PSU-1000ATX-12N is not a self-dissipating product and must be connected to an existing water cooling system via its external fitting sockets (G 1/4 BSPP threading). A PCI L-bracket "slot adapter" is provided for easy hose routing back into the chassis through an available card slot. This helps reduce the power supply's internal length.

When used at maximum output capacity, Koolance recommends a water cooling system capable of dissipating at least 200W of heat. This is in addition to other water-cooled components. In other words, if your cooling system is designed around a 700W hardware heat load (CPU and dual video card water blocks, for example), the PSU-1000ATX-12N should be allotted an additional 200W of cooling capacity. If unavailable, it is also possible to dedicate a separate cooling system solely for the power supply, such as any of Koolance's Exos systems.

Features

- Power efficiency is rated at a minimum of 80%
- Fully modular plugs and cables
- Four 8-pin and four 6-pin PCI-Express connections for convenient quad SLI and CrossFire™ support
- Two 8-pin (or 4-pin) 12V connections for server motherboards
- Four internal temperature sensors, with liquid temp outputted for monitoring (when used with 50K Ohm compatible Koolance systems)
- Built-in audio alarm and auto-shutdown features based on three internal temperatures and the pump
- The only material in contact with the external cooling liquid is stainless steel

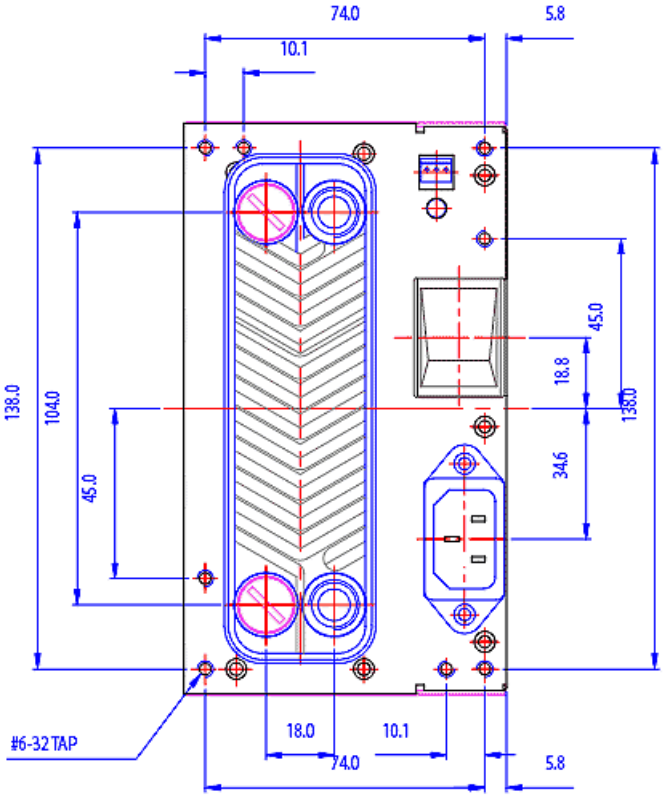
IMPORTANT NOTES

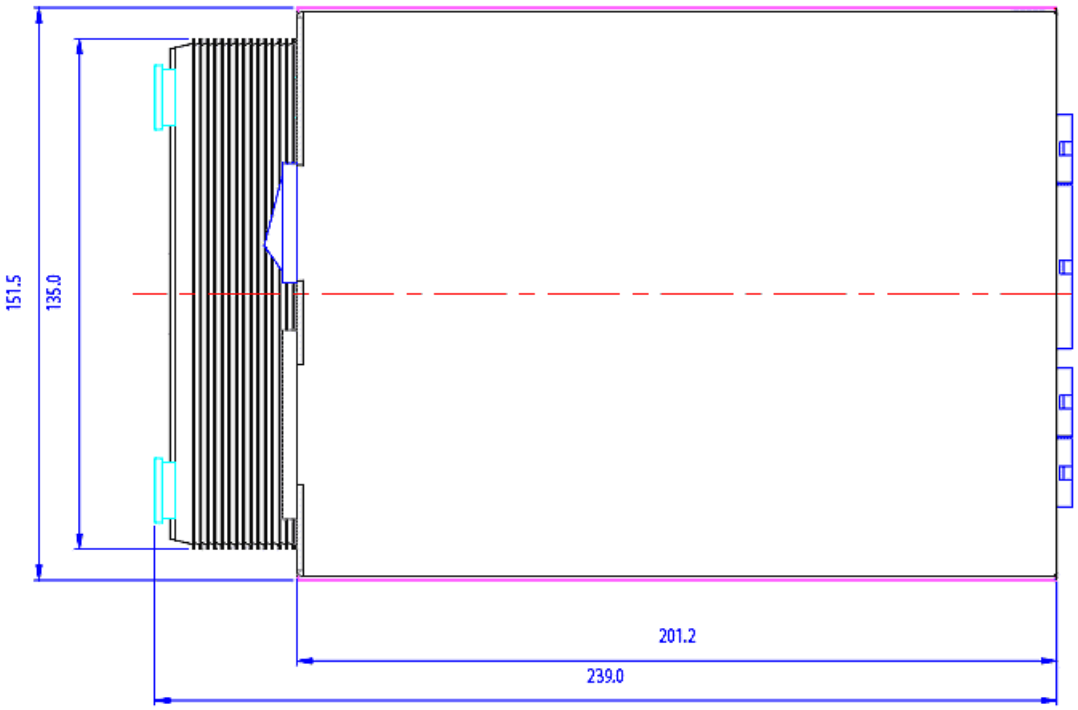
- The PSU-1000ATX-12N can be used in most ATX, E-ATX, and BTX chassis that provide for 8.15" (20.7cm) power supply depths, not including cable space. (Please see the compatibility page for more information.)
- The PSU-1000ATX-12N's small external liquid-to-liquid heat exchanger may conflict with some chassis that use restrictive rear mounting plates for the power supply. In most situations, minor modification to this plate (or removal, where possible) will fix the issue. (Please see the compatibility page and product manual for more information.)
- Due to the weight of the unit, additional support may be required for top-mounted-PSU chassis that can benefit from increased stabilization.
- For internal cooling systems, a PCI "slot adapter" is included to route 6mm (1/4in) or 10mm (3/8in) ID tubing back into the chassis. 13mm (1/2in) tubing will not easily fit through a PCI slot and must be routed into the chassis another way (for example, via the Koolance BKT-PCI-G).

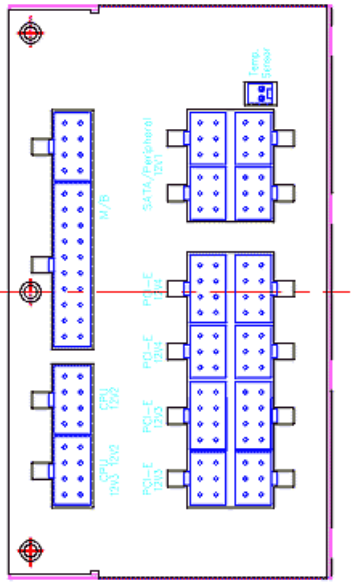
Power Specifications

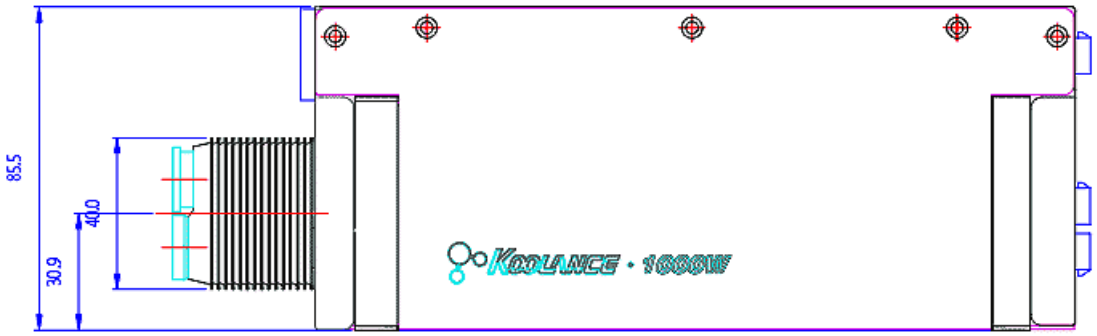
Type	EPS12V
Max. Power (Continuous)	1000W
Operating Range	110-240VAC, 47-63Hz, Auto-Switching
Current	12A @ 110V, 6A @ 240VAC
Fan	(none)
PFC	Active
Efficiency	80% Minimum
Power Factor	>0.99
DC Output	+5V @ 30A +3.3V @ 30A (combined +5V and +3.3V is 180W max) +12V @ 70A (12V1@18A, 12V2@18A, 12V3@30A, 12V4@30A) -12V @ 0.8A +5VSB @ 3.0A
Regulation	3% (3.3V, +5V, +12V) +3-5% (5Vsb) 10%(-12V)
Ripple & Noise	50mV (3.3V, 5V, 5Vsb), 120mV (-12V), 240mV (+12V)
Hold Time	16ms
PG Delay	100~500ms
Over Voltage Protection	+3.3V, +5V, +12V
Over Current Protection	+3.3V, +5V, +12V
Over Temperature Protection	Heat sink: 85°C Alarm, 90°C Power-Off
Pump Protection	Power-Off on no RPM signal
Operating Temperature	0-50°C (External secondary coolant temperature)
Storage Temperature	-10 - 70°C
Humidity	20-90% RH
Altitude	0-7000 feet (0-2134m)
Cables	1 x 24-pin motherboard 2 x 8-pin (or 4-pin) 12V CPU/motherboard 4 x 8-pin (1-plug) PCI-E 4 x 6-pin (1-plug) PCI-E 2 x (4-plug) SATA 1 x (4-plug) Molex 1 x (4-plug + 1 FD) Molex peripheral + floppy

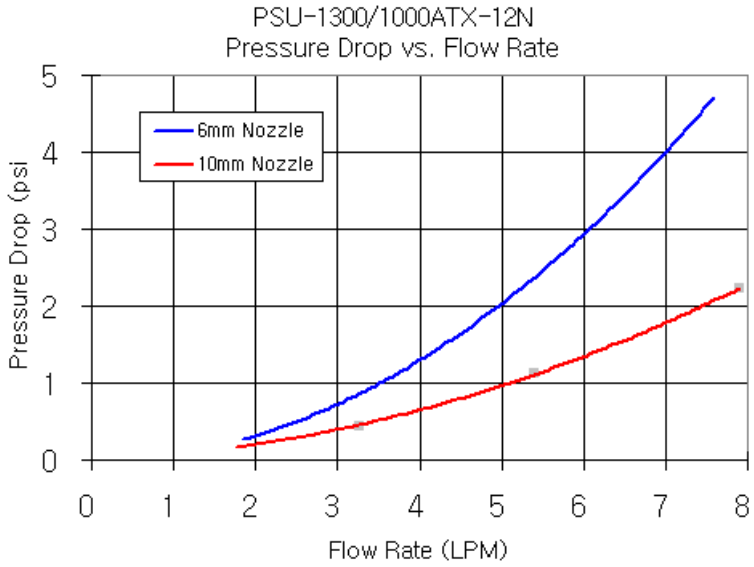
General	
Weight	12.40 lb (5.62 kg)
Wetted Materials	Nickel-Plated Brass, Stainless Steel, EPDM


74.0
5.8
10.1
138.0
104.0
45.0
45.0
18.8
138.0
34.6
#6-32 TAP
18.0
10.1
74.0
5.8


151.5
135.0
201.2
239.0




85.5
40.0
30.9
KOOLANCE · 1600W


PSU-1300/1000ATX-12N
Pressure Drop vs. Flow Rate
6mm Nozzle
10mm Nozzle
Pressure Drop (psi
Flow Rate (LPM)
0
1
2
3
4
5
6
7
8