UAV FACTORY

UNMANNED PLATFORMS AND SUBSYSTEMS

Datasheet v 2.0

100W GENERATOR POWER UNIT

- *Light weight, small and efficient*
- *13 V to 50 V input range*
- *100 W continuous load*
- *Compatible with brushed or brushless generators*
- *6 V and 12 V output*
- *Load current up to 10 A*
- *Short circuit protection*
- *Battery backup connection*
- *3 cell Li-Poly integrated charger*
- *External power connection*
- *Integrated current sensors*
- *Serial connection*
- *IP 64 housing*

100 W Generator Power Unit (GPU) is designed to provide onboard dual voltage regulated power supply for the unmanned aircraft vehicles.

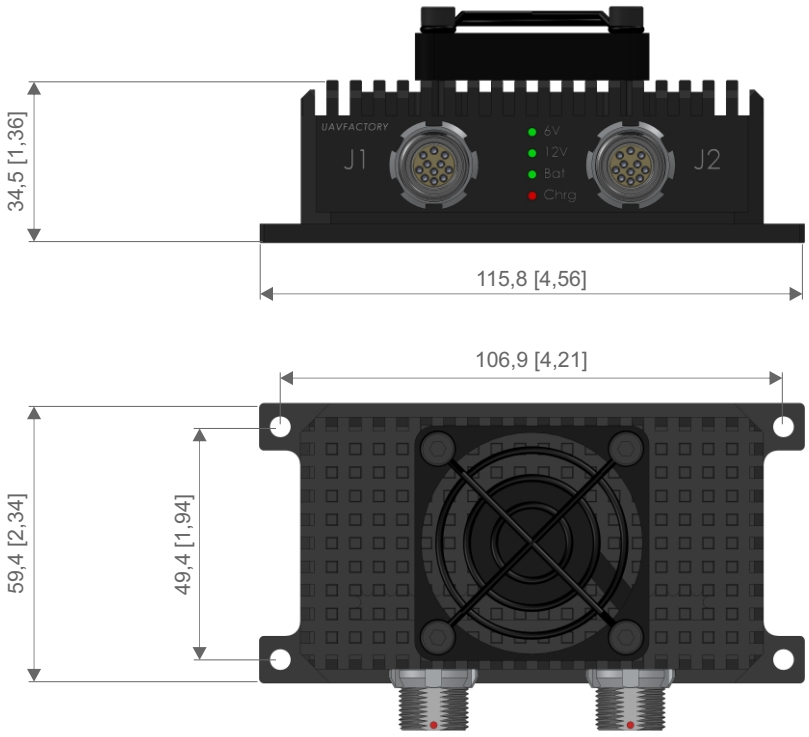
Despite small size, power unit offers outstanding efficiency as well as unique features such as the ability to monitor load, battery current, engine rpm, generator and battery voltage through TTL serial communication. All power distribution parameters can be transmitted to the ground station and monitored during the flight.

Generator power unit can be used with brushless or brushed generators that have a voltage output within 10-35 Volts and 13-50 Volts respectively. Integrated Lithium Polymer charger is used for the backup battery, which is switched on during the pre-flight checks, power peaks, or in the event of the engine failure.

Power unit is packed in a sealed aluminum enclosure and fitted with the high-end industrial push-pull connectors.

Please contact for customized solutions.

Dimensions:



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Electrical Specifications:

Parameter	Value
Brushed generator voltage range	13 – 50 VDC
Brushless generator line voltage range	10 – 35 VAC
External power supply voltage range	13 – 50 VDC
Battery Type	3 cells, Lithium Polymer
Battery Voltage	12.6 V
Maximum battery charging current	2 A
Maximum continuous generator input current	8 A
Maximum continuous battery input current	8 A
Maximum continuous external power current	8 A
Output voltage	6 V and 12 V
Maximum output voltage ripple	200 mV@6V 400mV@12V
Continuous load current, 6 Volt output [1]	5A
Continuous load current, 12 Volt output [1]	5A
Maximum peak load current	10 A for 10 seconds
Efficiency of 6 Volt output	85% typical
Efficiency of 12 Volt output	90% typical
No load GPU current	110 mA
Tachometer range	1000-9000 rpm
Tachometer accuracy	200 rpm
Current sensor range	0 to 10 A
Current sensor accuracy	0.2 A
Voltage sensor accuracy	0.1 V
Serial Communication	5V TTL

Mechanical Specifications:

Parameter	Value
Dimensions	59.4 x 115.8 x 32.4 mm
Weight (with conductive enclosure)	190 grams
Cooling method	Conductive or fan-assisted
Maximum enclosure temperature	70°C
Environmental protection	IP 64 standard, IP 68 on request
Operating temperature	- 40°C to +50°C [1]
Electrical connectors	Fischer 104 Series push-pull connector

[1] Enclosure temperature must not exceed 70°C, additional cooling may be required.

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