

TI5400A 400Hz GPU-24 UAV ACDC

The Tesla™ TI5400A 400Hz GPU-24 UAV ACDC is expertly engineered as a single source of power for the Global Hawk UAV and other UAV systems. Using a 30kVA 3-phase 400 Hz generator, the TI5400A 400Hz GPU-24 UAV ACDC provides reliable ground power and filtered 400 Hz power for UAV aircraft. Additionally, a Pure Sine Wave Inverter with a 60 Hz 120 Vac outlet allows you to conveniently plug in laptops, cell phone chargers, and other electronic equipment.

As always, the TI5400A 400Hz GPU-24 UAV ACDC is backed by a Tesla™ 2-year warranty, a trained military support team, and an experienced staff of customer service professionals.

Features:

- 3000 peak starting amps
- 29 V Unit that at 400 amps produces 28.5 Vdc continuous power
- TI2007-024 Cable drops 475 mV @ 400 Amps to maintain 28 V at the end of cable
- 10.4 kVA 30 amp 200/115 Vac 3-phase 400 Hz Wye ac filtering produces “clean” power to test avionics and weapons systems
- 2 kW 16.66 amp-24 amp Surge ac inverter with 60 Hz 120 Vac GFI power outlet
- Meets or exceeds Global Hawk aircraft system requirements
- Non-hazardous, dry-cell technology
- Exceeds MIL-STD-810F/MIL-STD-461



Power Anytime, Anywhere

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Features and Benefits

3-phase 400 Hz Power

The TI5400A 400Hz GPU-24 UAV ACDC comes equipped with a 3-phase 200Y/115 Vac 400 Hz Input under a weatherproof cover (shown in *Figure 1*). This input receives a 400 Hz cable assembly that will connect to any standard 3-phase 200Y/115 Vac 400 Hz receptacle.

EMC Filter/AC Filter

The 400 Hz 208Y/120 Vac Output (shown in *Figure 2*) provides filtered 400 Hz 208Y/120 Vac at 30 amps for powering aircraft systems. Connected directly to the 400 Hz ac Input, the filter eliminates potentially harmful surges and high frequency noise and harmonics.

Pure Sine Wave Inverter with Power Outlet

Another standard feature is the 1,800 Watt ac uninterruptible pure sine wave inverter with 60 Hz 120V power outlet (shown in *Figure 3*). The outlet makes it convenient to plug in laptops, test instruments, cell phone chargers, and other electronic devices without using an alternate power source.

DC Output with “Push to Test” Button and LED Charge Status Meter

The DC Output Receptacle is an aviation battery style receptacle and will provide regulated 28.5 Vdc at up to 400 amps when the unit is plugged into 3-phase power. Up to 3000 peak amps are available from the internal cells. The built-in Charge Status Meter serves as a recharge state indicator for the dc output.

Includes Tesla™ Custom Cables and Connectors

The GPU comes ready for use with Tesla™ approved:

- 400 Hz aircraft power cable
- 17' TI2007-024 cable (15' 350 MCM cable, 2' 4/0 cable) with dc plug
- 60 Hz extension cable
- TI3100A DVAM (Digital Volt /Amp Meter)

Digital Volt / Amp Meter (TI3100A DVAM)

The Tesla™ Digital Volt /Amp Meter (shown in *Figure 4*) is a high powered measuring solution. The TI3100A DVAM provides measurements for dc voltage from 12 to 32 V and dc current up to 2000 amps for Aircraft and vehicle. Integrated with the Tesla™ Turbo Start™ GPU power supply, the DVAM is a valuable tool for troubleshooting and conducting systems checks.

Optional Transportation Case and Tow Cart

The Tesla™ TI2000-155 (shown in *Figure 5*) is a custom stainless steel cart designed especially to hold Tesla's™ TI5400A 400Hz GPU-24 UAV ACDC Storage Case (TI7000-129). The case can be secured directly to the cart, making the TI2000-155 the safest way to support and transport any TI5400A model out in the field and through hangars and flight lines. You can operate the TI5400A GPU-24 without ever removing it from the cart – simply remove the lid of the Storage Case for access to the entire unit.

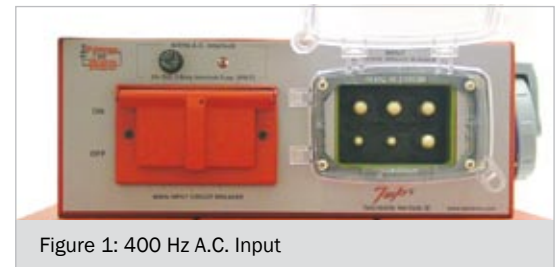


Figure 1: 400 Hz A.C. Input



Figure 2: 400 Hz 208Y/120 V.A.C. Output



Figure 3: Pure Sine Wave Inverter Control with 60 Hz A.C. Power Outlet

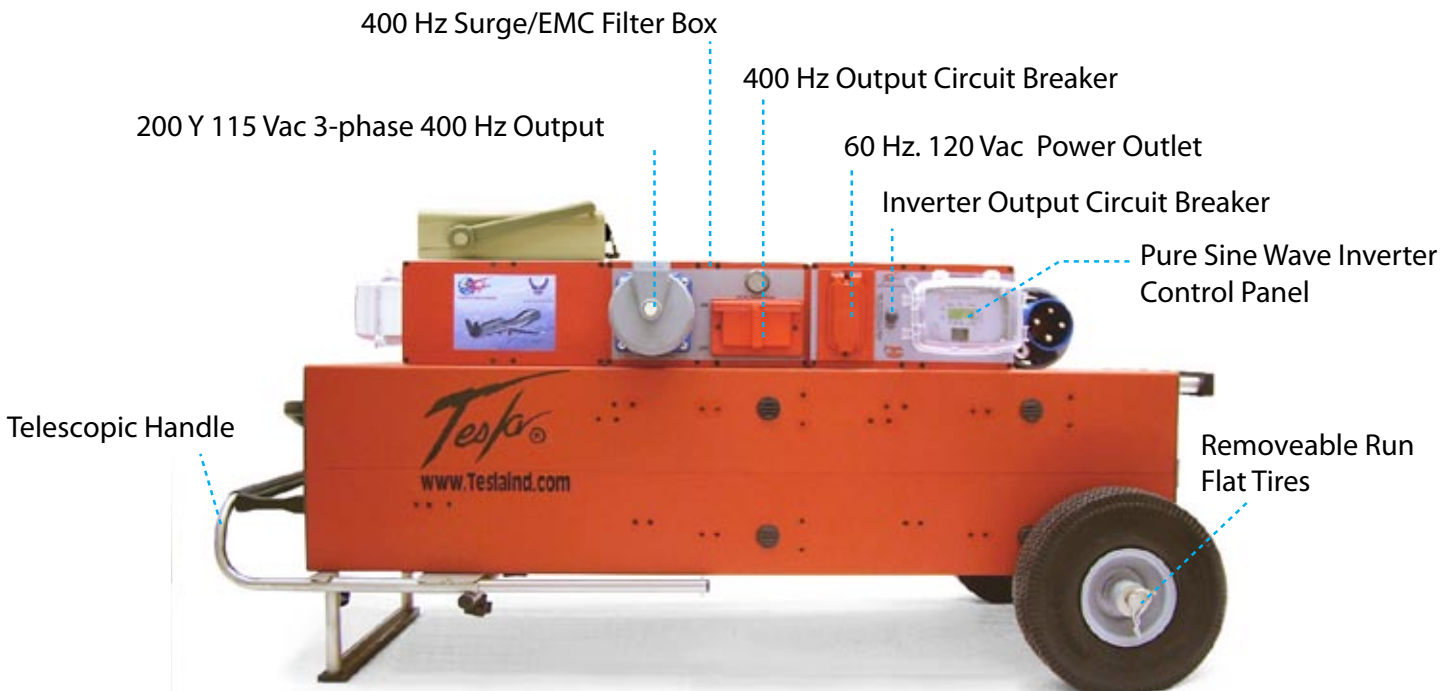
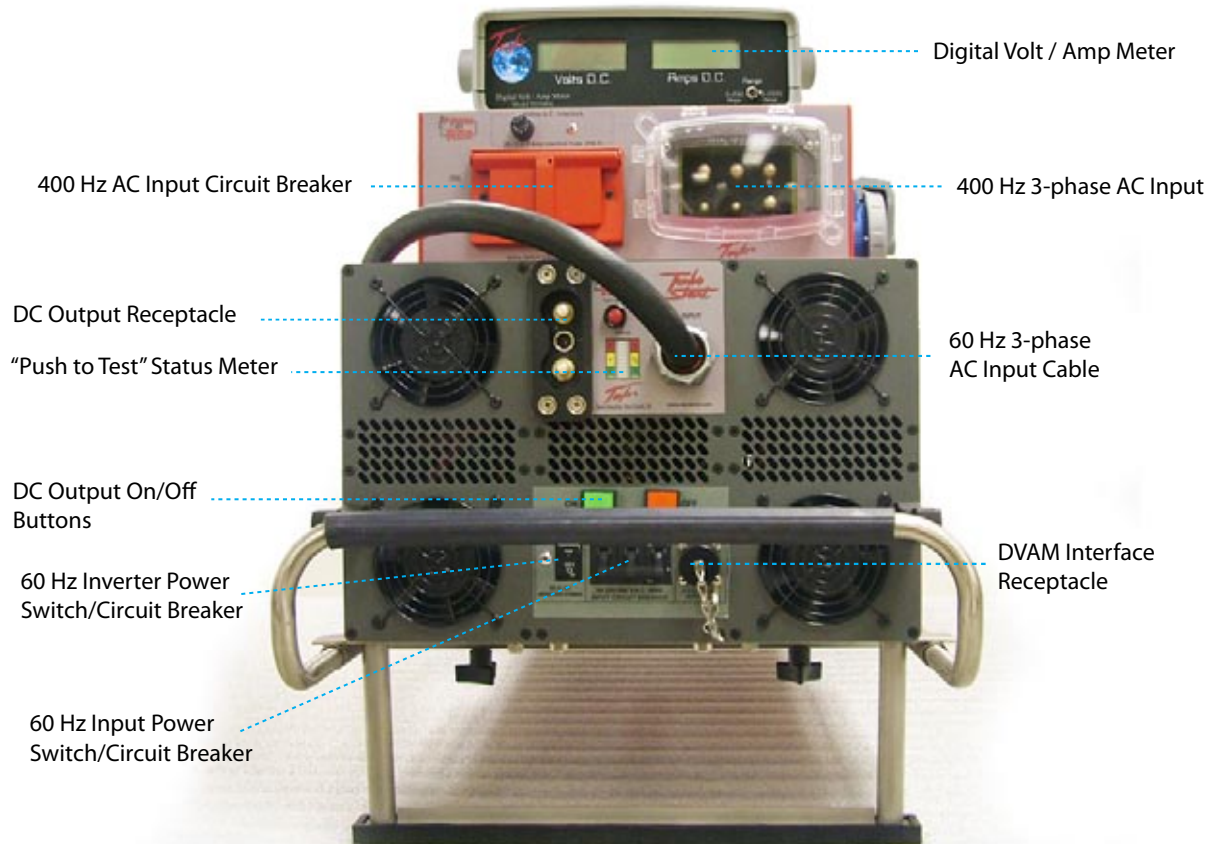


Figure 4: Tesla™ Digital Volt /Amp Meter

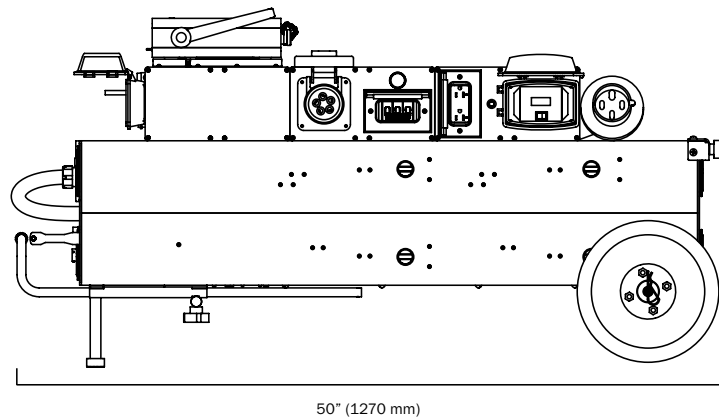
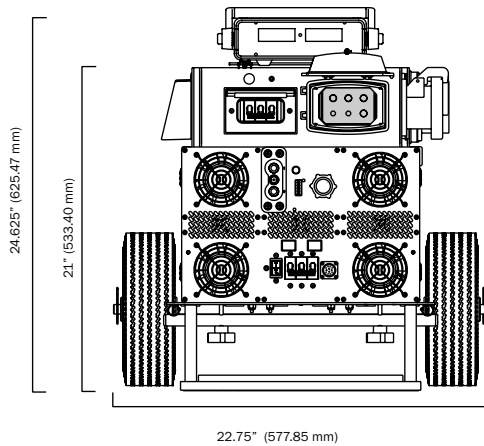


Figure 5: TI2000-155 Tow Cart with TI7000-129 Storage Case attached

Components View



Dimensions and Technical Specifications



* All dimensions are in inches [millimeters]

Technical Specifications:

AC Input	Operates and charges from either three phase 187-260 VAC 50/60 Hz or three phase Wye 115/200 Vac 400 Hz 42 amps @ 208 Vac 60 Hz 75 amps @ 200 Vac 400 Hz Requires 60 amp service for 50/60 Hz (contact Tesla™ for receptacle information) Requires 100 amp service for 400 Hz (contact Tesla™ for receptacle information)
AC Aircraft Power	200/115 VAC 3-phase 400 Hz Wye 30.0 amps max
AC Inverter	1800 watts 120 Vac 60 Hz Pure Sine Wave <3% THD. 15 amps output Surge 2900 watts Dual GFI receptacle
Type of Power Cell	High rate discharge/rechargeable/maintenance-free dry cell
DC Output	28.5 Vdc @ 400 amps continuous 28 Vdc @ end of TI2007-024 cable (15' 350 MCM cable, 2' 4 0 cable) 24.0 Vdc @ 46 amp hours rechargeable power
Peak Starting Amps	3000 A
Power Output Rate	446 amp hours (12,424 watt hrs) with 200-260 Vac power, 3-phase 46 amp hours (1,024 watt hrs) without 200-260 Vac power, 3-phase 1 hour constant power to 20.0 end Vdc
Recharging Rate	12 minutes @ 25°C from full discharge
Vibration	Exceeds MIL-STD-810F
Storage Temperature	-65°C to 105°C (-85°F to 221°F)
Operating Temperature w/o AC Power	-40°C to 60°C (-40°F to 140°F)
Operating Temperature w/ AC Power	-40°C to 55°C (-40°F to 131°F)
Weight	292 lbs (132.4 kg)
Warranty	2 years (3 years optional)



TI5400 GPU Series

Specifications / Comparison Chart



Standard Features	TI5400 GPU	TI5400 GPU 400 HZ GPU-24 GHMD	TI5400 GPU 400 HZ GPU-24 UAV ACDC	TI5400A GPU 400 HZ GPU-24 UAV ACDC
Telescopic handle and foam-filled tires for portability	X	X	X	X
400 Hz Aircraft Power Cable			X	X
LED charge status meter	X	X	X	X
DC Output Contactor with On /Off Buttons	X	X	X	X
Powder coated, extruded aluminum casing. Lightweight, strong and corrosion resistant.	X	X	X	X
2,000 Watt AC uninterruptible pure sine wave inverter with convenient power outlet (60Hz 120V) to plug in laptops, test instruments, cell phone chargers, and other electrical devices.			X	X
2 Year Limited Warranty	X	X	X	X
Digital Volt/Amp Meter			X	X
Options and Accessories				
Rain/Dust Cover	X	X	X	X
Shipping Case	X	X	X	X
Optional Tow Cart with rear wheel disc brakes	X	X	X	X
3 Year Limited Warranty	X	X	X	X
Physical Dimensions				
Weight	251 lbs.	267 lbs.	292 lbs.	292 lbs.
Dimensions	50.23"L x 24.5"W x 16.28"H	50.23"L x 24.5"W x 21.25"H	50.23"L x 24.5"W x 22.28"H	50.23"L x 24.5"W x 22.28"H

OPTIONAL ACCESSORIES



TI2000-155 Tow Cart for...
TI5400 Series GPUs



TI7000-083 Protective Cover for...
TI5400 400Hz GPU-24 GHMD,
TI5400 400Hz GPU-24 UAV ACDC,
TI5400A 400Hz GPU-24 UAV ACDC



TI7000-084 Protective Cover for...
TI5400 GPU-24



TI7000-129 Shipping Case for...
TI5400 400Hz GPU-24 GHMD,
TI5400 400Hz GPU-24 UAV ACDC,
TI5400A 400Hz GPU-24 UAV ACDC



TI7000-065 Shipping Case for...
TI5400 GPU-24



TI7000-190 Shipping Case for...
TI5400 400Hz GPU-24 UAV ACDC,
TI5400A 400Hz GPU-24 UAV ACDC



TI5400 GPU Series

Specifications / Comparison Chart



MIL-STD Certification	TI5400 GPU	TI5400 GPU 400 HZ GPU-24 GHMD	TI5400 GPU 400 HZ GPU-24 UAV ACDC	TI5400A GPU 400 HZ GPU-24 UAV ACDC
Meets or exceeds MIL810F / MIL 461 tests	X	X	X	X
Meets or exceeds Global Hawk aircraft system requirements	X	X	X	X
Performance Capabilities				
Input Requirements				
60Hz - runs/charges from 3-phase 208-240 Vac power 42 amps	X	X	X	X
400Hz - runs/charges from 3-phase 208-240 Vac power 45 amps		X		
400Hz - runs/charges from 3-phase 200 Y 115 Vac power 75 amps			X	X
Power Output				
400 amps @ 28.5 Vdc continuous 446 amps for 1 hour (10,615 watt hours) with 208-240 Vac power, 3-phase 46 amps for 1 hour (1,024 watt hours) without 208-240 Vac power, 3-phase 3000 peak starting amps	X	X		X
400 amps @ 30.25 Vdc continuous 446 amps for 1 hour (10,615 watt hours) with 208-240 Vac power, 3-phase 46 amps for 1 hour (1,024 watt hours) without 208-240 Vac power, 3-phase 3000 peak starting amps			X	
2 kW ac inverter with 60 Hz 120 Vac power outlet			X	X
10.8 kVA 30 Amp 200 Y 115 Vac 400 Hz. ac filter functions to purify "dirty" 400 Hz power to produce "clean" power to test avionics and weapon systems. The system instantly detects and suppresses any surges or spikes, safeguarding delicate electronics.			X	X
Recharge rate - ac to dc	12 min.	12 min.	12 min.	12 min.
Cross Platform Capabilities				
Power or start any vehicle/aircraft that utilizes a 24 volt system	X	X	X	X
Test delicate avionics and weapon systems	X	X	X	X
Provide reliable 400Hz* ground power <small>*requires 400Hz input power</small>			X	X
Advantages				
No Hazmat or disposal issues	X	X	X	X
Water resistant	X	X	X	X
Maintenance-free design	X	X	X	X
Technology upgrades available	X	X	X	X
Maintenance-free lead dry-cell power (No MSDS for Battery Acid)	X	X	X	X
Multiple starts with back-charge from started engine (applies to track and wheeled vehicles)	X			