

TRU 2400-2

28V TRANSFORMER RECTIFIER UNIT

Powervamp's TRU 2400-2 transformer rectifier unit will start and power all known 28V DC aircraft. Silent, environmentally clean, and easy to use, the TRU-2 offers users significant operating benefits.

Designed and built to the highest industry standards (MILSTD 704, ISO 6858), it produces the highest quality output signal with minimal AC ripple and is guaranteed to be accepted by all DC aircraft.

The 12 pulse rectification technology used ensures a low input total harmonic distortion less than 13% at nominal load, adding to the efficiency of the system.

The TRU 2400-2 produces a regulated 28V DC output and can deliver a constant current of 600A with engine starting peaks of up to 2400A. The current limiting feature enables the user to limit the output current to the aircraft and can be accessed and set via the digital display. The user can access the line drop compensation feature via the display menu to increase/decrease the output voltage at the plug within the limits of ISO 6858.

The TRU 2400-2 is a compact solid state module built to IP55 protection, designed for internal/external fixed or mobile use. With its weather-resistant, hot-dipped galvanized frame with wheels, the unit can be easily moved by hand over uneven surfaces.

Power consumption is reduced by the unique 'wake/sleep' feature which powers down the TRU 2400-2 after sensing that there has been no current draw for a pre-set time.

The TRU 2400 is available with 50/60Hz or 400Hz input depending on model.



Large, backlit control panel

Supplied as standard with



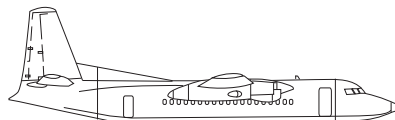
4m x 70mm² hard-wired Nato lead



2 x locking casters

Typical power plant:*

PT6C-67, Makila, TFE 731, ALF 502, HTF7000, RR Tay, or power plants of a similar specification



FBOs, multiple heli-ops requiring heavy comp washes, training, civil and military.
Ramp ops - large single shaft and 8-14 seat commuters, limited despatch or regional aircraft

*This information is given in good faith

TRU 2400-2

Specifications

INPUT

Voltage	400V or 208V (AC 3 wire +E) (depending on model)
Frequency	50/60Hz or 400Hz (depending on model)
Rectification	12 pulse
Inrush current	N/A
Power factor	> 0.86 @ nominal load
Line current	32A / 62A @ nominal load
Input harmonics	<12% @ nominal load

ENVIRONMENTAL

Acoustic noise	59 dB (A) @ 1 m
Temperature range	-40°C to +50°C (-40°F to +122°F)
Water ingress	IP55

OUTPUT

Voltage	28 V DC
Current	600 amps continuous
Engine start capacity	2400 A selectable
Ripple	Less than 1% at full load
Line drop compensation	up to 15%

OVERLOAD RATINGS

2400 A	2 seconds
2100 A	10 seconds
1800 A	30 seconds
1200 A	40 seconds

EFFICIENCY

Overall efficiency	Typically > 0.92 % @ nominal load
Stand by losses	250 W (Electronics)
No load losses	500 W (Output on)

WEIGHT

Standard mobile unit	230kg (507lb)
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DIMENSIONS

H 875mm (35in) W 837mm (33in) D 653mm (26in)
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Features

- Low total input harmonic distortion
- Digital display
- Unique energy-saving sleep mode controlled via the display
- System data logger
- Indoor/outdoor hangar use
- Line drop compensation
- External system control (option)
- Emergency power off
- Aircraft interlock/system interlock override
- Input frequency and voltage monitoring
- Output current limit feature
- Braking system
- Input and output cable storage

PROTECTIONS

Over/under voltage at the output	MTBF	100,000 hours
Over/under voltage at the Input	MTTR	20 minutes
Reverse current at the output		
Reverse polarity at the output		

STANDARDS

Phase sequence at the input	ISO 6858	Aircraft ground support electrical supplies
Over temperature	MIL-704E	Aircraft electric power characteristics
Internal PSU voltage monitoring	BS 2G 219	General requirements for ground support equipment
Short circuit at the output	EN 62040-1-1 LVD	Safety standards
Over/under voltage trip in the case that:	EN 61558-2-6 LVD	Safety standards
U<20 VDC for more than 4 seconds	EN 61000-6-2 EMC	Immunity standard
U>32 VDC for more than 4 seconds	EN 61000-6-4 EMC	Emission standards
U<40 VDC for more than 1 second	BS 2G 219	General requirements for ground support equipment

Other GPUs and power supplies in the Powervamp range



PS300



Coolspool 260



Coolspool 410



Coolspool Hybrid 300



Powervamp Ltd 22 Bridgwater Court, Oldmixon Crescent, Weston-super-Mare, BS24 9AY, England
Tel: +44 (0)1934 643000 Fax: +44 (0)1934 642800 Email: info@powervamp.com www.powervamp.com



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