

## 3-Phase, 480V Input, 3500W Industrial Quality AC-DC Power Supply HTP 3K5-3U4



- Rugged industrial quality
- 3-Phase input
- Cooling by internal fans
- Full electronic protection
- Field-proven design topology
- N+1 redundancy available

This rugged, industrial quality AC-DC power supply series with 3-phase input generates up to 3500W output power, depending on output voltage. It utilizes a field proven modular design concept with a track record in numerous heavy-duty applications. The unit is built with internal power modules, one FIB 380 and three KHI 1200 modules. A built-in redundancy diode separates the internal modules and also allows for a number of units to be connected in parallel to achieve higher output power, N+1 redundancy. The output redundancy diode also makes the unit suitable for battery charging applications. High quality built-in fans provide sufficient airflow for operation to the specified temperature without de-rating. The fans draw air into the unit and the exhaust exits at the rear of the unit. Full electronic protection, low component count, large design headroom and the use of components with established reliability result in a high MTBF. The unit is manufactured at our plant under strict quality control. Several units can be connected in parallel for higher output power. The design is also available in versions with higher and lower output power.

### SPECIFICATIONS

#### Input Voltage

480Vac, 3-phase (430-530V)  
47-63Hz  
DC-input 500-800V also available  
Other input voltages on request

#### Input Protection

Inrush current limiting  
Varistors  
Internal safety fuses  
Lower voltage than the specified minimum input will not damage the unit

#### Isolation

2250Vdc input to chassis  
4300Vdc input to output  
5600V type test  
8mm spacing  
2250Vdc output to chassis

#### Standards

Designed to meet EN62368-1 and related standards

#### EMI

EN55032 Class A with margins

#### Switching Frequency

55kHz  $\pm$ 3kHz

#### Output Voltage

Several standard output configurations available include 24V, 48V, or 125Vdc. Custom voltage upon request up to 600Vdc.  
Output is floating; either terminal can be grounded  
Other outputs on request

#### Redundancy Diode

According to requirements

#### Line/Load Regulation

$\pm$ 1% combined from zero load to full load including redundancy diode

#### Dynamic Response

Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time

#### Output Ripple/Noise

Better than 0.2% rms or 1% peak-to-peak of the output voltage (20MHz BW)

#### Output Overload Protection

Rectangular current limiting with short-circuit protection (no hiccup)  
Thermal shutdown in case of insufficient cooling (self-resetting)

#### Output Overvoltage Protection

Second regulator loop completely stable and independent of the main regulator loop

#### Efficiency

Min 80% at full load depending on input/output configuration

#### Operating Temperature Range

0°C to 50°C for full specification  
Wider range available as option

#### Temperature Drift

0.03% per °C over operating temperature range

#### Cooling

By two built-in high quality fans

#### Environmental Protection

Basic ruggedizing  
Conformal coating  
Heavy ruggedizing available as an option

#### Shock/Vibration

IEC 61373 Cat 1 A&B

#### Humidity

5 - 95% non-condensing

#### MTBF

90,000 hours @ 45°C (fans excluded)  
Demonstrated MTBF is significantly higher.

#### Indicators

Diagnostic Output ON LED on each internal module visible through the rear perforation.

#### Control Input

None on standard version  
Available as option

#### Alarm Outputs

Not installed  
Available as option

#### Package/Dimensions (W x H x D)

3U4: 132 x 244 x 381 mm  
5.2" x 9.6" x 15"  
Excludes connectors and mounting brackets  
Mounting holes are clear

#### Weight

8 kg (18 lb)

#### Connections

Input: Terminal block  
Output: Terminal block or threaded studs

#### RoHS Compliance

Compliant

#### Warranty

Two years subject to application within good engineering practice. Contamination related failures not covered.

ABSOPULSE power supplies are designed and built to customer requirements. The specifications on this data sheet are generic guidelines only and are subject to change

OEM of industrial and railway quality DC-DC converters, AC-DC power supplies and battery chargers, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard. ABSOPULSE is a BAPT-facility.



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