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AP34G03K5281-02 Power Supply & Battery Charger

Overview
28V 125A DC Out, 3 & 1 Phase AC Input, Water Resistant Power Supply and Battery Charger.

Market(s)
Defense, Industrial

Typical Application(s)
Outdoor, Vehicles, Naval and others.

Product Highlights

- AC 3 Phase: 150-450VAC/60HZ, AC Single Phase: 85-264VAC/45-64HZ wide input range.
- Wide Output range – Isolated 23-32 VDC, 3,500W Power Supply
- Rugged & Waterproof (IP65)
- Extreme temperature operating ranges from -40℃ up to 60℃ (Derating starts at 60℃)
- High efficiency & Reliability
- Light Weight, less than 25Kg
- Designed to meet regulations MIL-STD-810, MIL-STD-461, EN61000, IEC/EN 62368-1: Ed.3
- Remote On / Off, Indication LEDs, Power Good, Ethernet Monitoring and Control
- MTBF > 45,000 Hours
- 25Kg
- Dimensions: 270 x 200 x 690 mm (W x H x D)
- Convection fan cooled

The AP34G03K5281-02 3,500w AC/DC is a DC power supply & battery charger with output of 28 VDC / 125 Amp., with its reliable construction and electronics, is best suited for harsh environmental conditions. Its waterproof housing, high performance and superb reliability make the AP34G03K5281-02 an ideal DC power source for use in vehicles, naval, open-air applications, and many others. The product can also be tailored to meet specific project requirements.

About Us
Aegis Power Systems, Inc. specializes in the design, development, and manufacture of AC-DC and DC-DC power supplies for high-performance, rugged, critical, and specialty applications. Markets served include defense, industrial, communications, aircraft, shipboard, rack mount, embedded computing, and electric vehicle applications. Contact us to find out if this item can be configured or redesigned to meet your specific technology need.

SPECIFICATIONS	(Typical at 25°C, nominal line and 100% load, unless otherwise specified.)
Input Voltage and Frequency	150-450VAC/60Hz, 3-Phase Y configuration inc. neutral. Full performance within 85-264 VAC, 45-65Hz.
Input Current	8.9A per line current with 230VAC three phase line-to-line input at 125A output current. 34.2A / 17.1A current with 115/230VAC single phase at 125A output current.
Power Factor	> 0.97 at 230Vac @ full load @ 28V.
Input Spikes	Withstand 2,500 V spikes EN61000-4-5 Level 3.
Inrush Current	Internally limited so that the peak RMS current is less than 35 Arms at 230VAC per.
Input Isolation	Input to chassis: 100 MOhm @ 1000V. Input to output: 1.1 GOhm @ 250V.
Current Waveform	Low-distortion sinusoidal, complies with the harmonic current limits of EN61000-3-2. THD<17% @ 230Vac @ full load @ 28V.
Missing Phase Protection	Protected from missing phase. Automatic recovery upon phase restoration.
Output Power	3500W 125A @ 28V @ 60℃
Voltage Regulation	Worst case deviation of the DC output voltage at the Point of Regulation (POR) for all operating and environmental conditions is less than ±1%.
Remote Sense	The remote sense lines, when connected to the desired POR (typically at the load) will compensate for up to 4 VDC @ 28V drop on the output cable. Maximum output power up to 3,500w include voltage drop.
Output Ripple	< 250 mVpp
Efficiency	89% @ 230VAC, Typ. at 28V at 125A
Output Isolation	Output is galvanically isolated (“floating”) from chassis (> 20 M. at 200 VDC). May be grounded at any polarity. Input to output electric strength 2,500 V.
Inhibit Input Control	A short to the VDC_RTN line (V<1.2 V @ 5 mA) inhibits DC Output. Open (I < 0.1 mA @ 5V) enables DC Output.
BIT Output	Isolated open-collector transistor of an Opto-coupler. Low (V < 0.5 VDC @ 2 mA): DC Output is enabled, and no failure detected. Open (I<0.1 mA @ 35 VDC max): disabled or failed DC output.
Current Monitor	Current signal proportional (“mirror”) to load current.

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Hold-up Time	25 / 45 mS at 115 / 230 Vac at 100%
Protections	Current Limit and Overload: Protected from overload and short circuit for indefinite time. Output is current limited (clamped) to 104 ± 3% of the rated current. Automatic constant current mode. Programmable hiccup parameters (voltage and time delay). Overvoltage: Automatic shutdown (latched) if a fault results in above 115±5% of the nominal voltage. Resets upon the recycling of the Inhibit input, or by removing the input power. Overtemperature: Programmable protection, Auto recovery after temperature drop.
Temperature	–40°C to +60°C Operating without derating / -40℃ to +80℃ storage in accordance with MIL-STD-810G.
Humidity	Up to 95% RH, Per MIL-TD-810G, Method 507.5
Salt-Fog	Per MIL-STD-810G, Method 509.5
Altitude	Non-operating: (Air Transport) up to 40Kft.
Shock and Vibration	MIL-STD-810G, Method 516.6 and 514.6
Fungus	Does not support fungus growth. Designed to meet guidelines of MIL-STD-454, Requirement 4.
EMI	Designed to meet MIL-STD-461F; CE102, CS101 CS114 (10 kHz to 400 MHz, Curve #5), CS115, CS116, RE101, RE102,RS101 and RS103 (2 MHz to 18 GHz 50 V/m)-
Reliability	MTBF > 45,000 hours when operating at full load in typical environment.
Cooling	Heatsink with Convection Fan Cooling
Connectors	D38999
Package	Enclosed case IP65 rated.
Dimensions	270 x 200 x 690mm (W x H x D)
Weight	20Kg (55 lbs) Maximum
Ingress Protection	IP65
Safety	IEC/EN 62368-1: Ed. 3
Country of Origin	Israel

Specifications subject to change without notice.

INSTALLATION

This device may only be installed and put into operation by qualified personnel. This device does not contain serviceable parts. If damage or malfunction should occur during installation or operation, immediately turn power off and send unit to the factory for inspection.

This device is designed for convection cooling and does not require an external fan. Do not obstruct airflow and do not cover heatsink. Keep the following installation clearances: 30mm on top, 30mm on the bottom, 250mm on the left and right sides are recommended when the device is loaded permanently. Increase this clearance to 350mm in case the adjacent device is a heat source (e.g. another power supply).

Risk of electrical shock, fire, personal injury, or death.

- Do not use the power supply without proper grounding (Protective Earth).
- Turn power off before working on the device.
- Protect against inadvertent re-powering.
- Make sure that the wiring is correct.
- Do not modify or repair the unit.
- Do not open the unit as high voltages are present inside.
- Caution must be taken not to touch the unit during operation. Burns may occur.