

COTEK

Professional Power Solutions Design and Manufacturing

Switching Mode Power Supply

Always Power Ready



* Constant current limit
* I2C, PMBUS, RS232 communication protocol



* Built-in ORing FETs
* Support parallel operation via CANBUS



www.cotek.com.tw

COTEK ELECTRONIC IND. CO., LTD

+886 3-389-1999 +886 3-380-2333

No.33, Sec. 2, Renhe Rd., Daxi Dist., Taoyuan City 33548, Taiwan



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YouTube

We aspire to enhance human life by simplifying complexity and enriching user experiences

COTEK is dedicated to listen to customer needs, and providing creative power conversion solutions accordingly. Our extensive worldwide distribution network ensures efficient and timely service locally. Furthermore, COTEK prioritize social and environmental responsibility and obtained ISO-14064-1 certification since 2023, marking the milestone for carbon reduction. Being a D&B ESG mark certified enterprise COTEK embraced ESG principles in our daily operations to make our society and environment better and greener.



COTEK Profile

COTEK is committed to providing proactive service, innovative technology and total quality assurance since COTEK was established in 1986. With Corporate Offices in Taoyuan, Taiwan, COTEK is a technology-oriented company focusing on developing, designing and manufacturing products including:

- 1 DC / AC Pure Sine Wave Inverter
- 2 Inverter / Charger
- 3 Battery Charger
- 4 AC / DC Switching Mode Power Supply
- 5 Rack Inverter
- 6 Rectifier



D&B Top 1000 Elite SME Award
D-U-N-S Number : 65-728-6662



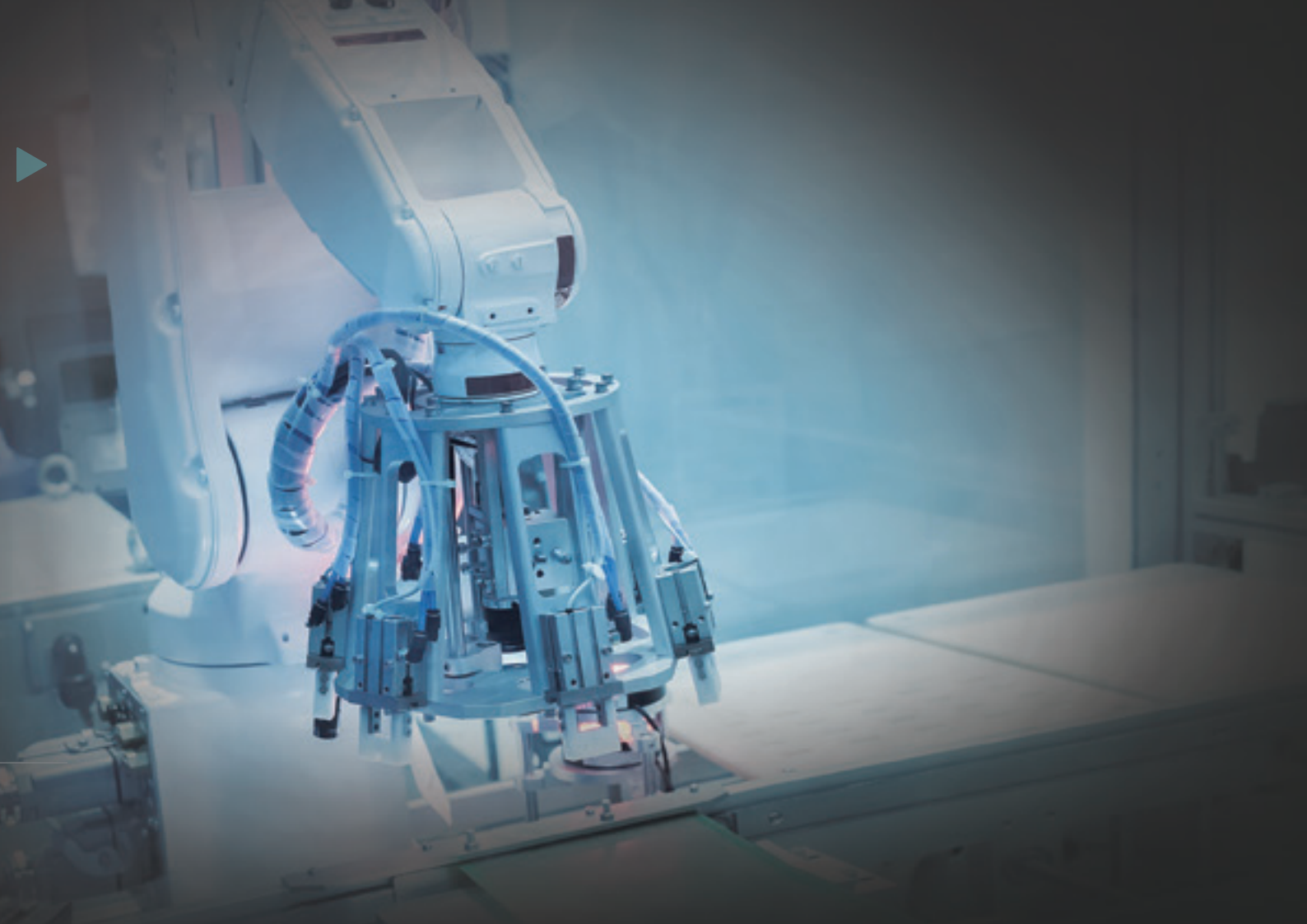
Applications ▶

Industrial

Process Control
Burn-in
Test & Measurement
Laser-Carving
Factory Automation
Digital Signage/Display
Industrial Robotics
Aerospace grounding power
Lighting

Why Cotek:

- Universal Input
- Wide programmable range
- PCBA conformal coating as default

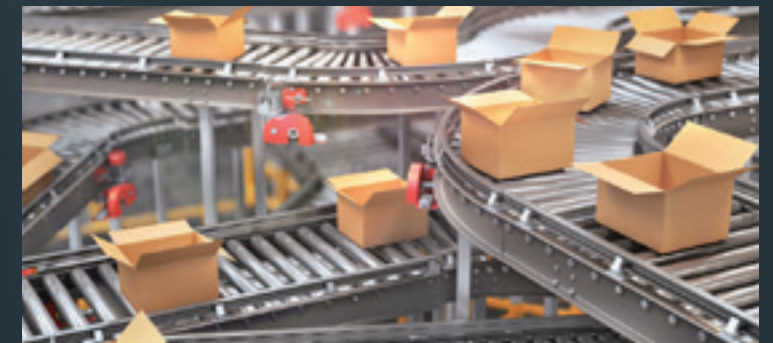


Conveyor

Conveyor Systems (Sortation, Crossbelt Sorter, etc.)
AGV Systems
Palletising and Depalletising System

Why Cotek:

- Wide programmable range
- Communication protocol available for PLC integration
- Parallel connection to support the power requirement for long distance production line
- Remote sense compensation voltage <0.5V
- Customized output voltage as default setting without having to update the safety approvals (cost saving)



Charging

EBUS/EV Charging
Warehouse automation
Smart Retail (Robotic)

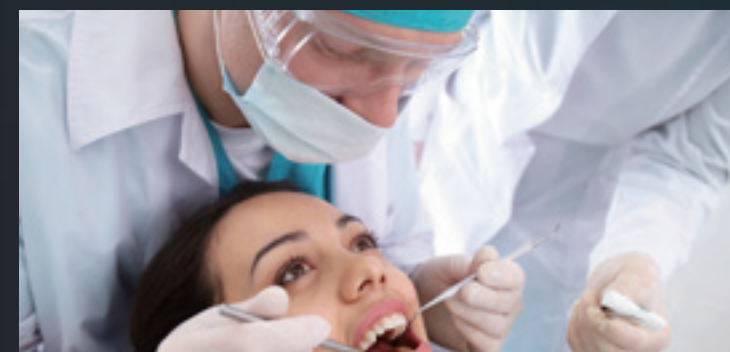
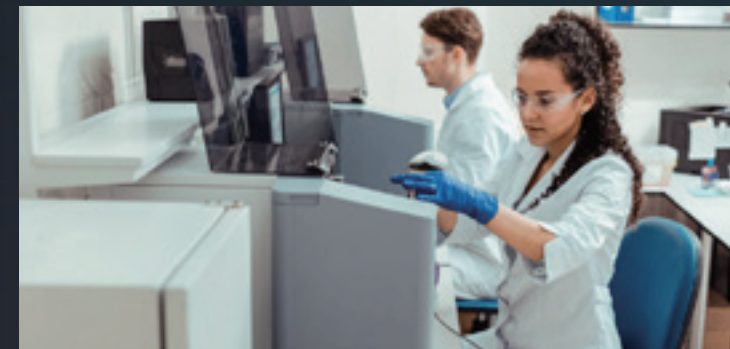


Why Cotek:

- Constant current limit
- Wide programmable range
- Remote communication & setting
- Parallel Connection
- CT-211 (optional charger board) to set CC, CV and floating curve for charger applications

Healthcare

Blood Analysis
Dental heating
Laboratory
Monitoring
Cytocentrifuge
Incubators



Why Cotek:

- Universal Input
- Wide programmable range
- PMBUS communication
- Temperature info read out

Product Index



General / Industrial


| Photo | Type | Output | Series | Main Features | DC Output | Power Rating (Wattages) | | | | | | Page |
|---|----------|--------|--------|---|-----------|-------------------------|-----|-----|------|------|------|------|
| | | | | | | 500 | 650 | 800 | 1000 | 1500 | 3000 | |
|  | Enclosed | Single | AD | <ul style="list-style-type: none">Support EthernetProgrammable output voltage / current up to 105%Forced current sharing at parallel operationConstant current limitI²C, PMBus (Meet), UART and MODBUS communication protocolAux output 5V/1ABuilt-in ORing FETsSupport parallel operation via CAN BusNew generation GUI available at request | LV | ○ | | ○ | | ● | ○ | P.7 |
| | | | | | HV | | | | | ● | ○ | |
|  | | | AE | <ul style="list-style-type: none">Programmable output voltage / current (0~105%)Constant current limitGlobal control via RS-232Multiple remote settings via RS-232, I²C and RS485Auxiliary output 5V/0.5A or 9V/0.3ARemote ON/OFFForce current sharing at parallel operationGUI available at request | LV | | | ● | | ● | ● | P.9 |
|  | | | AEK | <ul style="list-style-type: none">Force current sharing at parallel operationGUI available at request | LV | | | | | | ● ● | P.11 |
| | | | | | HV | | | | | | ● | |
|  | | | AK | <ul style="list-style-type: none">Programmable output voltage (30~105%) & current (40~105%)Remote ON/OFFForce current sharing at parallel operation | LV | | ● | | ● | | | P.13 |

■ Model Naming Rule : [AD-1500-XXX](#)
① Product Series ② Wattage ③ Output voltage
LV : 12 / 15 / 24 / 30 / 36 / 48 / 60 VDC
HV : 120 / 150 / 250 / 400 VDC

● = Standard Version (Available to order) ● = ORing Version (Available to order)
○ = Coming Soon

Accessories

| Photo | Model Name | Description | Applicable Series |
|---|--------------------|---------------------------|------------------------------|
|  | CT-201/204/251/551 | RS-232/485 Interface card | ■ For AE, AEK Series |
|  | CT-211 | Charger board | ■ For AE, AEK-3000-LV Series |

| Photo | Model Name | Description | Applicable Series |
|---|-----------------------------------|------------------------------|-------------------|
|  | AD - COMM - C11 / A23 / A24 / D11 | Communication Interface card | ■ For AD Series |

Note: For the Accessories detail spec., please contact Sales if required.

AD-Series

1.5KW 12~400VDC Programmable Digital Power Supply



Features

- Universal AC input/Full range (90~264Vac)
 - Programmable output voltage & current 0~105%
 - Forced current sharing at parallel operation
 - Constant current limit
 - AUX POWER : +5.0V/1.0A auxiliary
 - Built-in OR'ing FETs
 - I²C, PMBus(meet), UART, and MODBUS communication protocols
(Reference datasheet for detail interface version info.)
- Support parallel operation via CAN Bus
 - Linear output voltage & current control by external signal/resistor
 - Intelligent GUI to set and monitor parameter
 - Power OK signal
 - Remote on/off, Remote sense function
 - Protection: OVP, OLP, OTP, UTP, AC/Power/Fan Failure

Support Ethernet



| Protection | |
|----------------------------|--|
| Over Load | 105% rated output power Protection type: Constant current limit |
| Over Voltage | Programmable OVP, 120 ± 7% Vout. Protection type: Latch-style (Recovery after reset AC power ON or inhibit) |
| Over Temperature | Detect on NTC, Protection type: Auto recovery after temperature goes down |
| Function | |
| Auxiliary Power | +5.0V / 1.0A |
| Remote ON/OFF Control | By external switch / communication |
| Power OK Signal | Open drain signal low when PSU turns on, Max. sink current: 20mA, Max. drain voltage: 40V |
| Output Voltage Trim | Adjustment of output voltage is between 0% ~ 105% of rated output (C11 Version) |
| Output Current Trim | Adjustment of output current is between 0% ~ 105% of rated output (C11 Version) |
| Parallel | Current sharing via CANBUS (A23 & A24 Version) |
| Environment | |
| Working Temperature | -25 ~ +60°C (Refer to load de-rating curve) |
| Working Humidity | 20 ~ 90% RH non-condensing |
| Storage Temp. & Humidity | -40°C ~ 85°C, 10 ~ 95% RH |
| Temperature Coefficient | ± 0.02% / °C (0°C ~ 50°C) |
| Vibration | 10 ~ 500Hz, 2G 10min. / 1cycle, period for 60min. each along X, Y, Z axes Compliance to IEC 68-2-6, IEC 68-2-64 |
| Safety & EMC | |
| Safety Standards | UL 62368-1; EN 62368-1 |
| Withstand Voltage | I/P-O/P: 3KVAC (4242VDC), I/P-FG: 1.5KVAC (2121VDC), O/P-FG: 0.5KVAC (707VDC) |
| Isolation Resistance | I/P-O/P, I/P-FG, O/P-FG: 100M Ohms / 500VDC |
| EMI Conduction & Radiation | EN 55032; EN 61204-3; EN 61000-6-3 |
| Power Harmonic & Voltage | EN 61000-3-2; EN 61000-3-3 |
| Fluctuation and Flicker | |
| EMS Immunity | EN55035: 2017 / A11: 2020 ; IEC 61000-4-2,3,4,5,6,8,11 |
| Other | |
| Cooling | Load and temperature control fan |
| Product Dimension (WxHxD) | LV : 127.8 x 64 x 313.7 mm / 5.03 x 2.52 x 12.35 inch HV : 127.8 x 64 x 296.3 mm / 5.03 x 2.52 x 11.67 inch |
| Packing | LV : 2.42kg; 6pcs / 17.2kg / 1.86CUFT HV : 2.21kg; 6pcs / 16kg / 1.86 CUFT |

Low Output Voltage (LV)

| | AD-1500-12-xxx | AD-1500-15-xxx | AD-1500-24-xxx | AD-1500-30-xxx | AD-1500-36-xxx | AD-1500-48-xxx | AD-1500-60-xxx |
|-----------------------|--|----------------|----------------|----------------|----------------|----------------|----------------|
| Output | | | | | | | |
| DC Voltage | 12V | 15V | 24V | 30V | 36V | 48V | 57V |
| Rated Current | 125A | 100A | 62.5A | 50A | 41.7A | 31.3A | 26.32A |
| Current Range | 0 ~ 125A | 0 ~ 100A | 0 ~ 62.5A | 0 ~ 50A | 0 ~ 41.7A | 0 ~ 31.3A | 0 ~ 26.32A |
| Rated Power* | 1500W | | | | | | |
| Ripple & Noise (Max.) | 150mVp-p | 150mVp-p | 240mVp-p | 300mVp-p | 360mVp-p | 480mVp-p | 570mVp-p |
| Voltage Adj. Range | ±5.0% Typical adjustment | | | | | | |
| Voltage Tolerance | ±2.0% (rate output voltage of single unit) | | | | | | |
| Current Tolerance | ±3.0% (rate output current of single unit) | | | | | | |
| Line Regulation | ±1.0% | | | | | | |
| Load Regulation | ±1.0% | | | | | | |
| Setup, Rise Time | 1300ms, 100ms at full load (230V ac) | | | | | | |
| Hold Up Time (Typ.) | 14ms / 230VAC at full load | | | | | | |
| Input | | | | | | | |
| Voltage Range | 90 ~ 264VAC, 127~370VDC (Refer to de-rating curve) | | | | | | |
| Frequency Range | 47 ~ 63Hz | | | | | | |
| Power Factor (Typ.) | 0.95 / 230VAC, 0.99 / 115VAC at ful load | | | | | | |
| Efficiency (Typ.) | 89% | 90% | 92% | 92% | 92% | 92% | 93% |
| AC Current (Typ.) | 18A / 115VAC, 9A / 230VAC | | | | | | |
| Inrush Current (Typ.) | 30A / 115VAC, 45A / 230VAC | | | | | | |
| Leakage Current | < 3.5mA / 240VAC | | | | | | |

High Output Voltage (HV)

| | AD-1500-120-xxx | AD-1500-150-xxx | AD-1500-250-xxx | AD-1500-400-xxx |
|-----------------------|--|-----------------|-----------------|-----------------|
| Output | | | | |
| DC Voltage | 120V | 150V | 250V | 400V |
| Rated Current | 12.5A | 10.0A | 6.0A | 3.75A |
| Current Range | 0 ~ 12.5A | 0 ~ 10.0A | 0 ~ 6.0A | 0 ~ 3.75A |
| Rated Power* | 1500W | | | |
| Ripple & Noise (Max.) | 1200mVp-p | 1500mVp-p | 2500mVp-p | 4000mVp-p |
| Voltage Adj. Range | ±5.0% Typical adjustment | | | |
| Voltage Tolerance | ±2.0% (rate output voltage of single unit) | | | |
| Current Tolerance | ±3.0% (rate output current of single unit) | | | |
| Line Regulation | ± 1.0% | | | |
| Load Regulation | ± 1.0% | | | |
| Setup, Rise Time | 1200ms, 100ms at full load (230V ac) | | | |
| Hold Up Time (Typ.) | 14ms / 230VAC at full load | | | |
| Input | | | | |
| Voltage Range | 90 ~ 264VAC, 127~370VDC (Refer to de-rating curve) | | | |
| Frequency Range | 47~63Hz | | | |
| Power Factor (Typ.) | 0.95 / 230VAC, 0.99 / 115VAC at ful load | | | |
| Efficiency (Typ.) | 92% | | | |
| AC Current (Typ.) | 18A / 115VAC, 9A / 230VAC | | | |
| Inrush Current (Typ.) | 30A / 115VAC, 45A / 230VAC | | | |
| Leakage Current | < 3.5mA / 240VAC | | | |

*AD-1500-120-xxx, xxx can be **A23, A24, C11 or D11**
Communication protocol: A23: UART (RS-485), and Meet PMBus A24: MODBUS & Meet PMBUS C11: UART (RS-485) D1: Ethernet
*Rated power could be de-rated when AC input is below 100VAC, please refer to datasheet



AE-Series

800W~3KW Wide Programmable Range
Single Output Power Supply



Features

- Universal AC input / Full range
- Programmable output voltage & current (0%~105%)
- Forced current sharing at parallel operation
- Constant current limit
- Selectable +5V / 0.5A or +9V / 0.3A auxiliary output
- Global control via RS232 / RS485 protocol
- Remote setting multiple PSU via RS-232, RS-485 & I²C
- Power OK signal
- Remote ON / OFF, Remote sense function
- Protection: OVP, OLP, OTP, OCP and Fan Failure

| Protection | |
|----------------------------|--|
| Over Load | 105% rated output power, Protection type: Constant current limit |
| Over Voltage | Variable OVP Refer to VCI VS OVP curve.(OVP Tolerance 7%) Protection type : Latch-style (Recovery after reset AC power ON or inhibit) |
| Over Temperature | 85 ±5°C detect on NTC, Protection type: Auto recovery after temperature goes down |
| Environment | |
| Working Temperature | AE-800 : -20 ~ +60°C AE-1500 & AE-3000 : -25 ~ +60°C (Refer to load de-rating curve) |
| Working Humidity | 20 ~ 90% RH non-condensing |
| Storage Temp. & Humidity | -40°C ~ 85°C, 10 ~ 95% RH |
| Temperature Coefficient | ± 0.02% / °C (0°C ~ 50°C) |
| Vibration | 10 ~ 500Hz, 2G 10min. / 1cycle, period for 60min. each along X, Y, Z axes Compliance to IEC60068-2-6; IEC60068-2-64 |
| Safety & EMC | |
| Safety Standards | Certified EN 62368-1; UL62368-1 |
| Withstand Voltage | I/P-O/P: 3KVAC (4242VDC), I/P-FG: 1.5KVAC (2121VDC), O/P-FG: 0.5KVAC (707VDC) |
| Isolation Resistance | I/P-O/P, I/P-FG, O/P-FG: 100M Ohms / 500VDC (25°C / 70% RH) |
| EMI Conduction & Radiation | Certified EN 55032; EN 61204-3; EN 610000-6-3 |
| Power Harmonic & Voltage | Certified EN 61000-3-2; EN 61000-3-3 |
| Fluctuation and Flicker | |
| EMS Immunity | Certified EN 55035: 2017 / A11: 2020; IEC 61000-4-2,3,4,5,6,8,11 |
| Other | |
| Cooling | Load and temperature control fan |
| Product Dimension (WxHxD) | AE-800 : 127x41x249 mm / 5.00x1.61x9.80 inch AE-3000 : 127x127x325mm/5.00x5.00x12.80 inch AE-1500 : 127x64x280 mm / 5.00x2.52x11.02 inch |
| Packing | AE-800 : Per Product 1.62kgs ; 9pcs / 17kg / 2.03CUFT AE-1500 : Per Product 2.6kg; 6pcs / 16.6kg / 1.86CUFT AE-3000 : Per Product 5.25kgs ; 4pcs / 22kg / 1.86CUFT |

| Output | AE-800-12 | AE-800-15 | AE-800-24 | AE-800-30 | AE-800-36 | AE-800-48 | AE-800-60 |
|------------------------|---|------------|------------|------------|------------|------------|------------|
| DC Voltage | 12V | 15V | 24V | 30V | 36V | 48V | 60V |
| Rated Current | 66.7A | 53.4A | 33.5A | 26.7A | 22.3A | 16.7A | 13.4A |
| Rated Power* | 800W | | | | | | |
| Ripple & Noise (Max.) | 120mVp-p | 150mVp-p | 240mVp-p | 300mVp-p | 360mVp-p | 480mVp-p | 600mVp-p |
| Voltage Adj. Range | ± 5.0% Typical adjustment by potentiometer. (VR1) | | | | | | |
| Voltage Tolerance | ±2.0% (rated output voltage of single unit) | | | | | | |
| Current Tolerance | ±3.0% (rated output current of single unit) | | | | | | |
| Line & Load Regulation | ± 1.0% | | | | | | |
| Setup, Rise Time | 800ms, 100ms at full load | | | | | | |
| Hold Up Time (Typ.) | 8ms / 230VAC at full load | | | | | | |
| Input | | | | | | | |
| Voltage Range | 90 ~ 264VAC, 127 ~ 370VDC (Refer to de-rating curve) | | | | | | |
| Frequency Range | 47~63Hz | | | | | | |
| Power Factor (Typ.) | 0.95 / 230VAC, 0.98 / 115VAC at full load | | | | | | |
| Efficiency (Typ.) | 89% | 90% | 92% | 92% | 92% | 92% | 93% |
| AC Current (Typ.) | 9.3A / 115VAC, 3.5A / 230VAC | | | | | | |
| Inrush Current (Typ.) | 30A / 115VAC, 60A / 230VAC | | | | | | |
| Leakage Current | < 3.5mA / 240VAC | | | | | | |
| Output | AE-1500-12 | AE-1500-15 | AE-1500-24 | AE-1500-30 | AE-1500-36 | AE-1500-48 | AE-1500-60 |
| DC Voltage | 12V | 15V | 24V | 30V | 36V | 48V | 60V |
| Rated Current | 125A | 100A | 62.5A | 50A | 41.7A | 31.3A | 25A |
| Rated Power* | 1500W | | | | | | |
| Ripple & Noise (Max.) | 150mVp-p | 150mVp-p | 240mVp-p | 300mVp-p | 360mVp-p | 480mVp-p | 600mVp-p |
| Voltage Adj. Range | ±5.0% Typical adjustment by potentiometer. (Via V-Adj from PSU front panel) | | | | | | |
| Voltage Tolerance | ±2.0% (rated output voltage of single unit) | | | | | | |
| Current Tolerance | ±3.0% (rated output current of single unit) | | | | | | |
| Line & Load Regulation | ± 1.0% | | | | | | |
| Setup, Rise Time | 800ms, 100ms at full load | | | | | | |
| Hold Up Time (Typ.) | 14ms / 230VAC at full load | | | | | | |
| Input | | | | | | | |
| Voltage Range | 90 ~ 264VAC, 127 ~ 370VDC (Refer to de-rating curve) | | | | | | |
| Frequency Range | 47~63Hz | | | | | | |
| Power Factor (Typ.) | 0.95 / 230VAC, 0.99 / 115VAC at ful load | | | | | | |
| Efficiency (Typ.) | 89% | 90% | 91% | 92% | 92% | 92% | 93% |
| AC Current (Typ.) | 18A / 115VAC, 9A / 230VAC | | | | | | |
| Inrush Current (Typ.) | 30A / 115VAC, 45A / 230VAC | | | | | | |
| Leakage Current | < 3.5mA / 240VAC | | | | | | |
| Output | AE-3000-12 | AE-3000-15 | AE-3000-24 | AE-3000-30 | AE-3000-36 | AE-3000-48 | AE-3000-60 |
| DC Voltage | 12V | 15V | 24V | 30V | 36V | 48V | 60V |
| Rated Current | 250A | 200A | 125A | 100A | 83.5A | 62.5A | 50A |
| Rated Power* | 3000W | | | | | | |
| Ripple & Noise (Max.) | 150mVp-p | 150mVp-p | 240mVp-p | 300mVp-p | 360mVp-p | 480mVp-p | 600mVp-p |
| Voltage Adj. Range | ± 5.0% Typical adjustment by potentiometer. (VR1) | | | | | | |
| Voltage Tolerance | ± 2.0% | | | | | | |
| Current Tolerance | ±3.0% (rated output current of single unit) | | | | | | |
| Line & Load Regulation | ± 1.0% | | | | | | |
| Setup, Rise Time | 2000ms, 100ms at full load | | | | | | |
| Hold Up Time (Typ.) | 14ms / 230VAC at full load | | | | | | |
| Input | | | | | | | |
| Voltage Range | 90 ~ 264VAC, 127 ~ 370VDC (Refer to de-rating curve) | | | | | | |
| Frequency Range | 47~63Hz | | | | | | |
| Power Factor (Typ.) | 0.95 / 230VAC, 0.98 / 115VAC at full load | | | | | | |
| Efficiency (Typ.) | 89% | 90% | 91% | 91% | 92% | 92% | 93% |
| AC Current (Typ.) | 36A / 115VAC (3000W), 18A / 230VAC (3000W) | | | | | | |
| Inrush Current (Typ.) | 60A / 115VAC, 90A / 230VAC | | | | | | |
| Leakage Current | < 3.5mA / 240VAC | | | | | | |



AEK-Series

3KW 12~400VDC Wide Programmable Range Single Output Power Supply



Features

- Universal AC input / Full range
 - Programmable output voltage & current (0%~105%)
 - High power density 16.3W / inch³
 - Forced current sharing at parallel operation
 - Constant current limit
 - Selectable +5V / 0.5A or +9V / 0.3A auxiliary output
 - Remote setting multiple PSU via RS-232, RS-485 & I²C
 - Built-in Oring Diode
- Power OK signal
 - Remote ON / OFF, remote sense function
 - Protection: OVP, OLP, OTP, OCP and Fan Failure
 - Global control via RS232 / RS485 protocol
 - Built-in isolation IC for communication
 - Built-in I²C and RS485 communication interface

| | AEK-3000 |
|----------------------------|---|
| Protection | |
| Over Load | 105% rated output power. Protection type: Constant current limit |
| Over Voltage | Variable OVP, 120±7% Vout. Refer to VCI v.s. OVP curve in the datasheet Protection type: Latch-style (Recovery after reset AC power ON or inhibit) |
| Over Temperature | 85 ± 5°C detect on NTC, Protection type: Auto recovery after temperature goes down |
| Environment | |
| Working Temperature | -20 ~ +60°C (Refer to load de-rating curve) |
| Working Humidity | 20 ~ 90% RH non-condensing |
| Storage Temp. & Humidity | -40°C ~ 85°C, 10 ~ 95% RH |
| Temperature Coefficient | ± 0.02% / °C (0°C ~ 50°C) |
| Vibration | 10 ~ 500Hz, 2G 10min. / 1cycle, period for 60min. each along X, Y, Z axes Compliance to IEC 60068-2-6, IEC 60068-2-64 |
| Safety & EMC | |
| Safety Standards | Certified UL 62368-1; EN 62368-1 |
| Withstand Voltage | I/P-O/P: 3KVAC (4242VDC), I/P-FG: 1.5KVAC (2121VDC), O/P-FG: 0.5KVAC (707VDC) |
| Isolation Resistance | I/P-O/P, I/P-FG, O/P-FG: 100M Ohms / 500VDC (25°C / 70% RH) |
| EMI Conduction & Radiation | Certified EN 55032; EN 61204-3; EN 610000-6-3 |
| Power Harmonic & Voltage | Certified EN 61000-3-2; EN 61000-3-3 |
| Fluctuation and Flicker | |
| EMS Immunity | Certified EN 55035: 2017 / A11: 2020; IEC 61000-4-2,3,4,5,6,8,11 |
| Other | |
| Cooling | Load and temperature control fan |
| Product Dimension (WxHxD) | LV & HV : 170x64x280 mm / 6.69x2.52x11.02 inch |
| Packing | LV : 3.9kg; 6pcs / 25.9kg / 2.48CUF HV : 3.3kg; 6pcs / 22.7kg / 2.48CUFT |

Low Output Voltage (LV)

| | AEK-3000-12 | AEK-3000-15 | AEK-3000-24 | AEK-3000-30 | AEK-3000-36 | AEK-3000-48 | AEK-3000-60 |
|-----------------------|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Output | | | | | | | |
| DC Voltage | 12V | 15V | 24V | 30V | 36V | 48V | 60V |
| Rated Current | 200A | 160A | 125A | 100A | 83.5A | 62.5A | 50A |
| Current Range | 0 ~ 200A | 0 ~ 160A | 0 ~ 125A | 0 ~ 100A | 0 ~ 83.5A | 0 ~ 62.5A | 0 ~ 50A |
| Rated Power* | 2400W | 2400W | 3000W | 3000W | 3006W | 3000W | 3000W |
| Ripple & Noise (Max.) | 150mVp-p | 150mVp-p | 240mVp-p | 300mVp-p | 360mVp-p | 480mVp-p | 600mVp-p |
| Voltage Adj. Range | ±5.0% Typical adjustment by potentiometer. (Via V-Adj from PSU front panel) | | | | | | |
| Voltage Tolerance | ±2.0% (rated output voltage of single unit) | | | | | | |
| Current Tolerance | ±3.0% (rated output current of single unit) | | | | | | |
| Line Regulation | ±1.0% | | | | | | |
| Load Regulation | ±1.0% | | | | | | |
| Setup, Rise Time | 800ms, 100ms at full load | | | | | | |
| Hold Up Time (Typ.) | 14ms / 230VAC at full load | | | | | | |
| Input | | | | | | | |
| Voltage Range | 90 ~ 264VAC, 127 ~ 370VDC (Refer to de-rating curve) | | | | | | |
| Frequency Range | 47~63Hz | | | | | | |
| Power Factor (Typ.) | 0.95 / 230VAC, 0.98 / 115VAC at full load | | | | | | |
| Efficiency (Typ.) | 88% | 89% | 91% | 91% | 92% | 92% | 93% |
| AC Current (Typ.) | 19.7A / 115VAC (2000W), 16.5A / 230VAC (3000W) | | | | | | |
| Inrush Current (Typ.) | 33A / 115VAC, 65A / 230VAC | | | | | | |
| Leakage Current | < 3.5mA (240VAC) | | | | | | |

High Output Voltage (HV)

| | AEK-3000-150 | AEK-3000-200 | AEK-3000-250 | AEK-3000-300 | AEK-3000-400 |
|----------------------------|---|--------------|--------------|--------------|--------------|
| Output | | | | | |
| DC Voltage | 150V | 200V | 250V | 300V | 400V |
| Rated Current | 20A | 15A | 12A | 10A | 7.5A |
| Current Range | 0 ~ 20A | 0 ~ 15A | 0 ~ 12A | 0 ~ 10A | 0 ~ 7.5A |
| Rated Power* | 3000W | 3000W | 3000W | 3000W | 3000W |
| Ripple & Noise (Max.) | 1500mVp-p | 2000mVp-p | 2500mVp-p | 3000mVp-p | 4000mVp-p |
| Voltage Adj. Range | ±5.0% Typical adjustment by potentiometer. (Via V-Adj from PSU front panel) | | | | |
| Voltage Tolerance | ±2.0% (rated output voltage of single unit) | | | | |
| Current Tolerance | ±3.0% (rated output current of single unit) | | | | |
| Line Regulation | ±1.0% | | | | |
| Load Regulation | ± 1.0% | | | | |
| Setup, Rise Time | 1100ms, 350ms at full load | | | | |
| Hold Up Time (Typ.) | 14ms / 230VAC at full load | | | | |
| Input | | | | | |
| Voltage Range | 90 ~ 264VAC, 127 ~ 370VDC (Refer to de-rating curve) | | | | |
| Frequency Range | 47~63Hz | | | | |
| Power Factor (Typ.) | 0.95 / 230VAC, 0.98 / 115VAC at full load | | | | |
| Efficiency(Typ.) STD/ORing | 93% / 91% | | | | |
| AC Current (Typ.) | 19.7A / 115VAC (2000W), 14.5A / 230VAC (3000W) | | | | |
| Inrush Current (Typ.) | 33A / 115VAC, 65A / 230VAC | | | | |
| Leakage Current | < 3.5mA (240VAC) | | | | |



AK-Series

650W & 1KW Programmable Single Output Power Supply



Features

- Universal AC input / Full range
 - Programmable output voltage (30%~105%)
 - Programmable output current (40%~105%)
 - +5V / 0.5A auxiliary output
 - 1U profile, high power density 11.1W / in³ (AK-1000)
 - Forced current sharing at parallel operation
- Power OK signal
 - Remote ON / OFF, remote sense function
 - Protection: OVP, OLP, OTP, OCP, Fan failure

| Protection | | |
|----------------------------|--|---|
| Over Load | 105~125% rated output power | Protection type: Total power limit, latch-style (recovery after reset AC power ON or inhibit) |
| Over Voltage | Variable OVP, 125 ± 10% Vout. | Protection type: Latch-style (Recovery after reset AC power ON or inhibit) |
| Over Temperature | By detecting primary and secondary heat sink Protection type: Shutdown O/P voltage (Recovers automatically after temperature goes down) | |
| Function | | |
| Auxiliary Power | 5V / 0.5A (±3%) | |
| Remote ON/OFF Control | External switch or NPN transistor to turn ON / OFF | |
| Power OK Signal | Open drain signal low when PSU turns ON, Max. sink current: 20mA; Max. drain voltage: 40V | |
| Output Voltage Trim | Adjustment of output voltage is between 30~105% of rated output | |
| Output Current Trim | Adjustment of output current is between 40~105% of rated output | |
| Parallel | Yes, please refer to datasheet | |
| Environment | | |
| Working Temperature | -25 ~ +60°C (Refer to load de-rating curve) | |
| Working Humidity | 20 ~ 90% RH non-condensing | |
| Storage Temp. & Humidity | -40°C ~ 85°C, 10 ~ 95% RH | |
| Temperature Coefficient | ± 0.02% / °C (0°C ~ 50°C) | |
| Vibration | 10 ~ 500Hz, 5G 10min. / 1cycle, period for 60min. each along X, Y, Z axes Compliance to IEC 68-2-6; IEC 68-2-64 | |
| Safety & EMC | | |
| Safety Standards | Certified EN 62368-1; UL 62368-1 | |
| Withstand Voltage | I/P-O/P: 3KVAC (4242VDC), I/P-FG: 1.5KVAC (2121VDC), O/P-FG: 0.5KVAC (707VDC) | |
| Isolation Resistance | I/P-O/P, I/P-FG, O/P-FG: 100M Ohms / 500VDC (25°C / 70% RH) | |
| EMI Conduction & Radiation | Certified EN 55032; EN 61204-3; EN 610000-6-3 | |
| Power Harmonic & Voltage | Certified EN 61000-3-2; EN 61000-3-3 | |
| Fluctuation and Flicker | | |
| EMS Immunity | Certified EN 55035: 2017 / A11: 2020; IEC 61000-4-2,3,4,5,6,8,11 | |
| Other | | |
| Cooling | Load and temperature control fan | |
| Product Dimension (WxHxD) | AK-650 : 127x41x249 mm / 5.00x1.61x9.80 inch (WxHxD) | AK-1000 : 127x41x283 mm / 5.00x1.61x11.14 inch (WxHxD) |
| Packing | AK-650 : Product 1.68kgs ; Per Carton 9pcs / 16.1kgs / 1.86CUFT | AK-1000 : Product 2.1kgs ; Per Carton 9pcs / 19.9kgs / 1.86CUFT |

| | AK-650-12 | AK-650-15 | AK-650-24 | AK-650-27 | AK-650-48 |
|-----------------------|--|---|-----------|------------|-----------|
| Output | | | | | |
| DC Voltage | 12V | 15V | 24V | 27V | 48V |
| Rated Current | 50A | 40A | 27A | 24A | 13.6A |
| Current Range | 0 ~ 50A | 0 ~ 40A | 0 ~ 27A | 0 ~ 24A | 0 ~ 13.6A |
| Rated Power* | 600W | 600W | 650W | 650W | 650W |
| Ripple & Noise (Max.) | 150mVp-p | < 1% (mVp-p), according to the rated output voltage | | | |
| Voltage Adj. Range | ± 5.0% Typical adjustment by potentiometer. (VR1) | | | | |
| Voltage Tolerance | ± 1.0% | | | | |
| Line Regulation | ± 0.5% | | | | |
| Load Regulation | ± 0.5% | | | | |
| Setup, Rise Time | 800ms, 60ms at full load | | | | |
| Hold Up Time (Typ.) | 16ms / 230VAC at full load | | | | |
| Input | | | | | |
| Voltage Range | 90 ~ 264VAC , 127 ~ 370VDC (Refer to load de-rating curve) | | | | |
| Frequency Range | 47~63Hz | | | | |
| Power Factor (Typ.) | 0.98 / 230VAC, 0.99 / 115VAC at full load | | | | |
| Efficiency (Typ.) | 88% | 88% | 90% | 90% | 91% |
| AC Current (Typ.) | 7.5A / 115VAC, 3.5A / 230VAC | | | | |
| Inrush Current (Typ.) | 27A / 115VAC, 54A / 230VAC | | | | |
| Leakage Current | < 1.0mA / 240VAC | | | | |
| | AK-1000-24 | AK-1000-27 | | AK-1000-48 | |
| Output | | | | | |
| DC Voltage | 24V | 27V | | 48V | |
| Rated Current | 40A | 37A | | 21A | |
| Current Range | 0 ~ 40A | 0 ~ 37A | | 0 ~ 21A | |
| Rated Power* | 960W | 1000W | | 1000W | |
| Ripple & Noise (Max.) | < 1% (mVp-p), according to the rated output voltage | | | | |
| Voltage Adj. Range | ± 5.0% Typical adjustment by potentiometer. (VR1) | | | | |
| Voltage Tolerance | ± 1.0% | | | | |
| Line Regulation | ± 0.5% | | | | |
| Load Regulation | ± 0.5% | | | | |
| Setup, Rise Time | 800ms, 60ms at full load | | | | |
| Hold Up Time (Typ.) | 16ms / 230VAC at full load | | | | |
| Input | | | | | |
| Voltage Range | 90 ~ 264VAC , 127 ~ 370VDC (Refer to load de-rating curve) | | | | |
| Frequency Range | 47~63Hz | | | | |
| Power Factor (Typ.) | 0.98 / 230VAC, 0.99 / 115VAC at full load | | | | |
| Efficiency (Typ.) | 89% | 89% | | 90% | |
| AC Current (Typ.) | 12A / 115VAC, 5A / 230VAC | | | | |
| Inrush Current (Typ.) | 27A / 115VAC, 54A / 230VAC | | | | |
| Leakage Current | < 1.0mA / 240VAC | | | | |

