AD-1500

1500W Programmable Digital Power Supply

In many applications, programmable power users continue to increase their demand for the power sources that offer CC and CV operation along with programmability, flexibility and user configurability. In response to market demand, Cotek successively developed our new 1.5KW programmable power supply, AD-1500 series to minimize Engineer's design-in efforts while fulfilling the complex requirements stated above.

Key features include

- Universal AC input/Full range (90~264Vac)
- Programmable output voltage & current 0~105%
- Programmable output voltage and current force
- Current sharing at parallel operation (Coming Soon!)
- Constant current limit
- AUX POWER ： +5.0V/1.0A auxiliary
- Built-in OR'ing FETs
- Support Parallel operation via CANBUS (Coming Soon!) Built-in isolation circuit (A23, A24 Version)
- Power OK signal (built-in isolation circuit)
- Remote on/off & sense
- Support PMBus(meet), MODBUS, RS232/485, and I^2C protocol
- Protection: OVP, OLP, OTP, UTP, AC Failure, Power and Fan Failures
- Built-in VR to adjust output voltage & current (C11 version)
- Built-in EEPROM to memorize power supply settings
- Optional Changeable interface cards: A23, A24, C11 and Ethernet (coming soon!)
- Intelligent GUI to set and monitoring parameter (Coming Soon!)

Smart GUI

to set and monitoring the power suppiles remotely

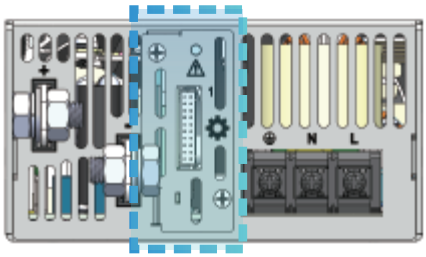
1 **Display Dashboard & Data charts**
Showing output voltage / current / wattage & NTC temperature ... info

2 **AD-1500 Setting**
To program output voltage & current from 0-105% & turn on / off the PSU

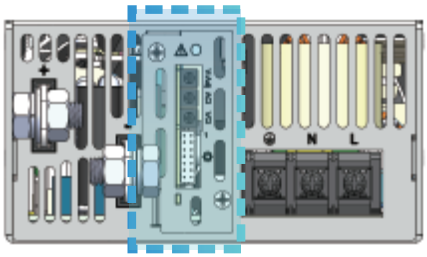
3 **Power Supply & GUI Version Info.**
Show the monitoring state of AD

Interface card

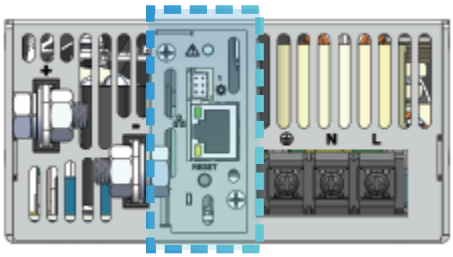
1. Support Parallel Connection
A23 & A24



2. Single unit
C11



3. Ethernet (Coming soon)



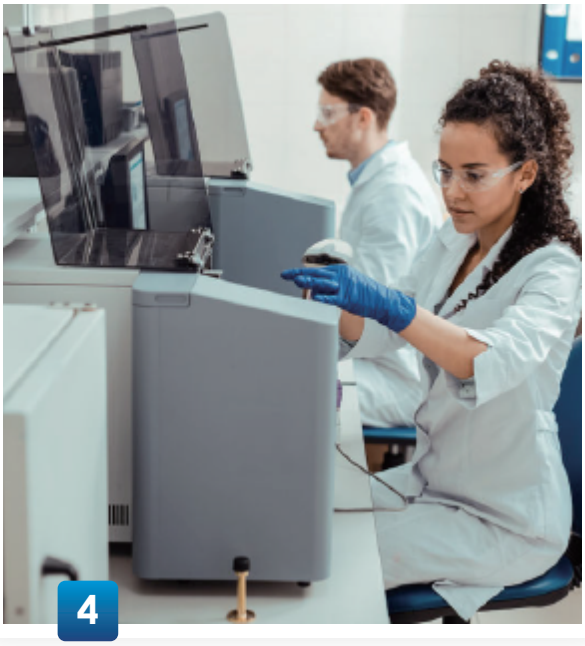
- Easier Parallel setup & Operation via CANBUS
- Communication Interface : Standard / Single / Ethernet (coming soon)
- Communication protocol : **A23 :** UART (RS-485) & Meet PMBus
  A24 : MODBUS & Meet PMBus
  C11 : UART (RS-485)

		AD-1500-12	AD-1500-15	AD-1500-24	AD-1500-30	AD-1500-36	AD-1500-48	AD-1500-60
Output	DC Voltage Rated	12V	15V	24V	30V	36V	48V	57V
	Rated Current	125A	100A	62.5A	50A	41.7A	31.3A	26.3A
	Current Range	0 ~ 125A	0 ~ 100A	0 ~ 62.5A	0 ~ 50A	0 ~ 41.7A	0 ~ 31.3A	0 ~ 26.3A
	Voltage Range	0~105% vs. rated						
	Rated Power	1500W	1500W	1500W	1500W	1500W	1500W	1500W
	Ripple & Noise (Max.) (Note. 2)	150mVp-p	150mVp-p	240mVp-p	300mVp-p	360mVp-p	480mVp-p	570mVp-p
	Voltage Adj. Range	±5.0% Typical adjustment						
	Voltage Tolerance (Note. 3)	±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 (Note. 4)	90 ~ 264VAC, 250~370VDC *						
	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 (cold start)						
	Leakage Current	< 3.5mA / 240VAC						
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 Connection (Note. 5)	Current sharing via CANBUS (A23 & A24 Version)						
Environment	Working Temp.	-25 ~ +60°C (Refer to load de-rating curve)						
	Working Humidity	20 ~ 90% RH non-condensing						
	Storage Temp. & Humidity	-40 ~ +85°C, 10 ~ 95% RH						
	Temp. Coefficient	±0.02% / °C (0 ~ 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 (Note. 7)	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 Fluctuation and Flicker	EN 61000-3-2; EN 61000-3-3						
	EMS Immunity (Note. 6)	EN55035: 2017 / A11: 2020 ; IEC 61000-4-2,3,4,5,6,8,11						
Others	Cooling	Load and temperature control fan						
	Dimension (WxHxD)	127.8x64x280.4 mm / 5.03x2.52x11.04 inch						
	Packing	2.2kg; 6pcs / 16kg / 1.86CUFT						

*Note:

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Tolerance: includes setup time tolerance, line regulation and load regulation.
4. De-rating may apply in low input voltage. Please check the de-rating curve for more details.
5. In parallel connection, only one unit will operate if the total output load is less than 10% of the rated power.
6. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
7. This test is done without enclosure: I/P-O/P 4242VDC. If with enclosure: I/P-O/P 2121VDC,I/P-FG:2121VDC, O/P-FG: 707VDC

Applicable Applications



1 **Industrial**
Process Control / Burn-in / Test & Measurement / Laser-Carving / Factory Automation ...

2 **Ethernet Related (coming soon)**
Industrial automation / Air Traffic Control / Financial Services /Mission Critical Application / CCTV ...

3 **Charging**
EBUS/EV Charging / Warehouse automation / Smart Retail (Robotic) ...

4 **Healthcare**
Blood Analysis / Dental heating / Laboratory / Monitoring / Cytocentrifuge / Incubators ...