

# DC Power Supply Models AX501, AX502 & AX503

## Single, Dual and Triple outputs



The AX500 Series of digital DC linear power supplies are designed for use in a wide variety of applications. They are equally at home in the precise needs of an electronic design lab, as well as the continuous operation required on a production test line. The state of the art linear technology provides a highly stable, low noise output with less than 1mV of ripple on each output. Active protection circuitry provides an extra level of insurance against damage from short circuits, overloads, and over heating. Highly efficient toroidal transformers allow these supplies to operate without fans, thus eliminating noise and electromagnetic emissions.

Three models are available offering single, dual and triple output capabilities. The single output, Model AX501 offers a 0 to 30VDC supply while the Models AX502 and AX503 each offer dual 30V outputs. Each provides the ability to display both voltage and current for each output. Additionally, the Model AX503 offers a 5V blind output which is adjustable from 2.7 to 5.5V. Dual 30V outputs can be connected in series to provide double the output voltage up to 60V, or they can be connected in parallel providing double the current output up to 5A. The Models AX502 and AX503 offer a unique master/slave tracking

arrangement whereby the ratio between master and slave can be setup on the fly as needed during the test. Adjusting the master voltage causes the slave to track. Adjusting the slave voltage causes the ratio from master to slave to change accordingly. All three models offer both a Coarse and Fine voltage adjustment as well as current limiting adjustment. Each of these supplies are built to provide many years of reliable, precise, easy-to-use operation and will be a welcome addition to any lab, test bench or production line.

## Features

- 1, 2, and 3 output models
- Clean, stable output <math><1\text{mVrms}</math> of ripple
- Adjustable 30VDC at up to 2.5A
- Adjustable 5VDC at 5A with 3 and 5V positions
- Connect the 30V outputs together to double voltage or current
- Master/Slave tracking with quick and easy setup
- Coarse and Fine voltage adjustments
- Current Limit adjustment with LED indication
- Short circuit protected at full rated current
- Display V and A simultaneously
- Front panel safety input terminals
- Front panel ground terminal

## Applications

- Engineering design labs
- Production testing
- Educational labs
- Quality assurance testing
- Approval agency testing
- Repair and calibration labs



Voltage levels and current limits are easily adjustable from the front panel.



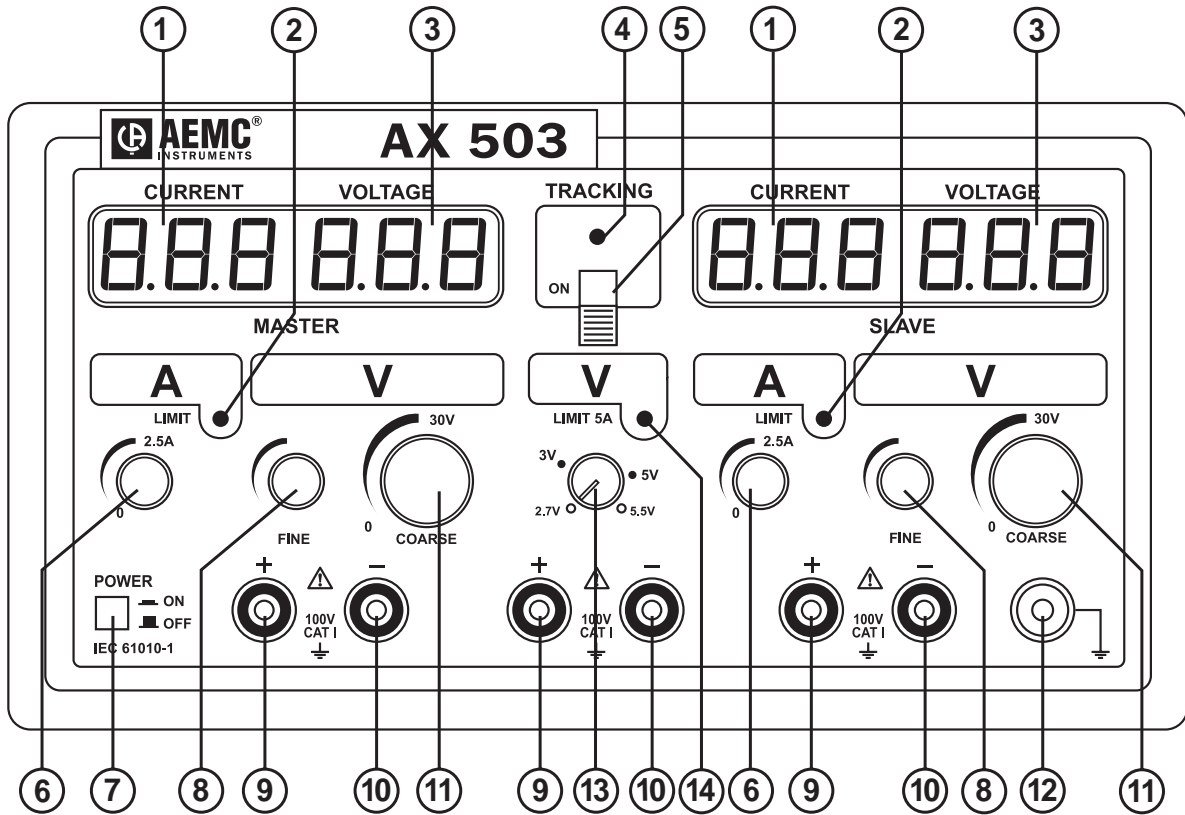
Circuit board design testing using the 30V and 5Vdc outputs

# Specifications

MODELS	AX501	AX502	AX503
Technology	Linear		
Number of Outputs	1	2	3
<b>VOLTAGE</b>			
Output 1	0 to 30Vdc	0 to 30Vdc	0 to 30Vdc
Output 2	–	0 to 30Vdc	0 to 30Vdc
Output 3 (No display)	–	–	2.7 to 5.5Vdc
Display Resolution	100mV	100mV	100mV
Accuracy	±0.5% Reading ± 1ct	±0.5% Reading ± 1ct	±0.5% Reading ± 1ct
Ripple	±1mVrms	±1mVrms	±1mVrms
<b>LINE REGULATION</b>			
± 10% Line Voltage	± 0.03% Voltage Reading ± 2mV		
<b>LOAD REGULATION</b>			
0 to 2.5A		±0.02% Voltage Reading ± 5mV	
0 to 5A	–	–	±0.2% Voltage Reading ± 10mV
<b>CURRENT</b>			
Output 1	0 to 2.5A	0 to 2.5A	0 to 2.5A
Output 2	–	0 to 2.5A	0 to 2.5A
Output 3	–	–	5A max (no adjustment)
Resolution	10mA	10mA	10mA
Basic Accuracy	±0.5% Reading ± 1ct	±0.5% Reading ± 1ct	±0.5% Reading ± 1ct
Limit Indicator	LED, Output 1	LED, Outputs 1 & 2	LED, Outputs 1, 2, & 3
Short-circuit Protection	Electronic current limitation with voltage shutdown		
Overheating Protection	Thermal protection		
<b>OUTPUT COUPLING</b>			
Tracking	–	Output 1: Master / Output 2: Slave Proportional Slave tracking (0 to 100% of Master)	
Series Mode	–	0 to 60Vdc / 0 to 2.5A	
Parallel Mode	–	0 to 30Vdc / 0 to 5A	
<b>GENERAL</b>			
Power Source	115Vac ± 10%		
Display (LED)	Dual Display: VOLTAGE in Green, CURRENT in Red; 0.56" (14.2mm) digit size		
Operating Temperature Range	50° to 104°F (10° to 40°C)		
Operating Relative Humidity	<80% RH up to 104°F (40°C)		
Storage Temperature Range	-4° to 158°F (-20° to 70°C)		
Dimensions	10.63 x 8.86 x 4.73" (270 x 225 x 120mm)		
Weight	8.8 lbs (4kg)	9.9 lbs (4.5kg)	13.2 lbs (6kg)
<b>SAFETY</b>			
Rating	EN 61010-1, 100V Cat. I, CE Mark		
Power Supply Inputs	Overvoltage Cat. 300V Cat. II		

Consult factory for changing to 220V supply.

# Construction



- 1. Current display  
(Models AX502 & AX503 only)
- 2. Current Limit LED
- 3. Voltage display
- 4. Tracking function LED  
(Models AX502 & AX503 only)
- 5. Tracking switch  
(Models AX502 & AX503 only)

- 6. Current Limit adjustment potentiometer
- 7. On/Off button
- 8. Fine voltage adjustment potentiometer
- 9. Output terminals (+)
- 10. Output terminals (-)

- 11. Coarse voltage adjustment potentiometer
- 12. Ground terminal ( $\perp$ )
- 13. Voltage adjustment potentiometer  
(Model AX503 only)
- 14. 5A current Limit LED  
(Model AX503 only)



*Optional Lead Set includes: two color-coded leads,  
one ground lead (stripped), two alligator clips, and two grip probes  
Catalog #2117.78*

ORDERING INFORMATION	CATALOG NO.
DC Power Supply Model AX501 (Single output, 0 to 2.5A; 0 to 30Vdc) . . . . .	Cat. #2130.05
DC Power Supply Model AX502 (Dual output, 0 to 2.5A; 0 to 30Vdc) . . . . .	Cat. #2130.06
DC Power Supply Model AX503 (Triple output, 0 to 2.5A; 0 to 30Vdc; 5A; 2.7 to 5.5Vdc) . . . . .	Cat. #2130.07
<b>Accessories</b>	
Lead Set (2 color-coded leads, 1 ground lead (stripped), 2 alligator clips, 2 grip probes). . . . .	Cat. #2117.78

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