

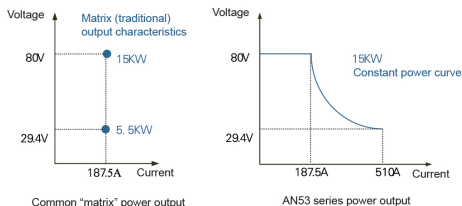
Wide Range Programmable DC Power Supply AN53(F) Series



Product Introduction

The AN53(F) Series Wide Range Programmable DC Power Supply adopts active power factor correction technology and high-frequency LLC multi-resonant soft switching inverter technology. It features high power factor, fast dynamic response, low output ripple, and high power density. It has the characteristic performance of constant power wide-range output, as well as advantages such as small size, light weight, low noise, high efficiency, and simple operation.

The AN53(F) Series expands the power output curve, providing users with a wider range of voltage and current combinations, making it more flexible than traditional "matrix" output range power supplies. The output range of a single constant power DC power supply may be several times that of a conventional rectangular power supply. For example, the AN53(F) Series 1500V/40A/5kW model can provide an output of 1500V 10A at 15kW power, or 375V 40A output. In comparison, for a traditional "matrix" output power supply, the output specification is 1500V/10A/15kW, and when the output voltage is 375V, the maximum current is still 10A, with a power of only 3.75kW.

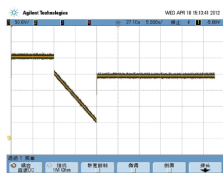


The AN53(F) Series simulates the output characteristics of solar batteries, with fast response, stable and accurate I-V curve simulation capability. It comes with built-in standard models such as SAS, EN50530, and Sandia lab for single unit operation, allowing precise simulation of photovoltaic I-V curves. Additionally, users can edit the parameters of solar battery panels through upper computer software or download a set of 1024-point V&I data into the power supply for operation, supporting dynamic, shading, and other operation modes.

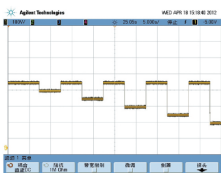
As a programmable power supply, the AN53(F) Series supports multiple communication interfaces and complies with the SCPI standard protocol, making it easy to understand and program control.

Features

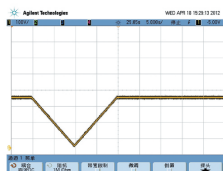
- It has the wide-range output capability, expanding the output range to 3 times that of "matrix" power supplies at the same power level.
- It utilizes active power factor correction technology, with full load power factor exceeding 0.99.
- It uses high-frequency LLC multi-resonant inversion, achieving a high overall efficiency of up to 0.95.
- It boasts the industry's best transient response speed.
- It features three working modes: constant voltage, constant current, and constant power, meeting a wide range of test requirements.
- It has powerful programmable functions and flexible settings.



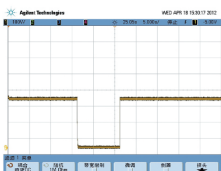
Simulation Battery Supply Voltage Sudden Drop Test



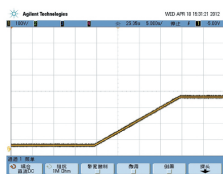
ISO16750-2 Voltage Reduction Reset Test Curve



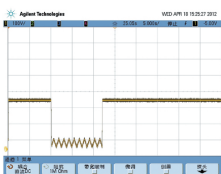
Simulation Battery Slow Drop and Slow Rise Supply Voltage Test



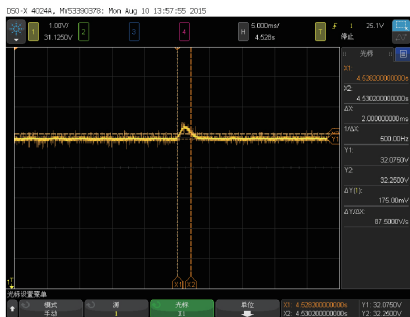
Communication Power Supply Input Sudden Drop Test



Output Voltage Rise Rate Test



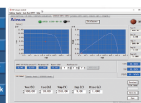
ISO16750-2 Startup Voltage Curve Test



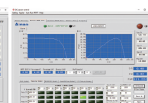
Photovoltaic Simulation Function



SAS Model Interface



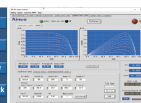
Photovoltaic SAS Simulation Function



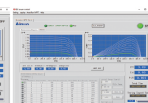
SandiaLab Model



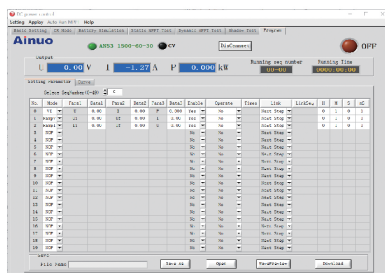
EN50530 Model Interface



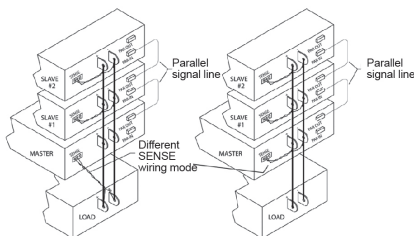
Dynamic MPPT



EN50530 Dynamic Simulation



- Built-in precise voltage and current measurement, excellent output stability.
- Lead drop compensation terminal to compensate for lead drop compensation during high current operation.
- Comprehensive protection functions to ensure the normal operation of power supply equipment and the safety of loads.
- High-brightness color LCD with exquisite appearance and simple and intuitive operation.
- It supports multiple units for parallel output to expand power/current range.



Multiple equipment can be flexibly configured as single output or parallel output

Specifications

Model		AN5380-120S(F)	AN5380-170S(F)	AN5380-170(F)	AN5380-340(F)	AN5380-510(F)
Input	Voltage	Single phase+PE, 198V-242VAC		Three-phase three-wire+PE, 340V-420VAC		
	Frequency	47-63Hz				
Output	Voltage	0-80V				
	Current	0-120A	0-170A	0-170A	0-340A	0-510A
	Power	0-1.8KW	0-3KW	0-5KW	0-10KW	0-15KW
Display mode		4.3-inch color LCD				
Measurement error (readback accuracy)	Voltage	≤0.05%Umax, resolution 0.01V				
	Current	≤0.1%Imax, resolution 0.01A (>100A, 0.1A)				
	Power	≤1%Pmax, resolution 0.001kW (>100kW, 0.01kW)				
Ripple and Noise 20Hz-20MHz	Vrms	30mV		40mV		
	Vpp	200mV		250mV		
Load effect		Voltages≤0.01%Umax, currents≤0.05%Imax				
Power effect		Voltages≤0.01%Umax, currents≤0.01%Imax				
Transient response time		≤2ms				
Maximum lead drop compensation		6.5V				
Communication control interface		Standard: RS232, RS485, CAN, and LAN, optional: GPIB, analog port, and USB				
Protection functions		Input undervoltage protection, short-circuit protection, reverse connection protection, output overvoltage and current-limiting protection, overheating protection, and S-terminal compensation function				
Parallel connection function		It supports multiple units for parallel output to expand power/current range.				
Working environment		Temperature 0-40℃; Humidity 20-90%RH				
Dimensions(W×H×D mm)		440×133×350		440×133×600		
Weight		16kg		17kg	27kg	37kg

Any changes to the above parameter specifications will not be notified separately.

Model		AN53300-15S(F)		AN53300-30S(F)	AN53300-50(F)	AN53300-100(F)	AN53300-150(F)
Input	Voltage	Single phase+PE, 198V-242VAC			Three-phase three-wire+PE, 340V-420VAC		
	Frequency	47-63Hz					
Output	Voltage	0-300V					
	Current	0-15A	0-30A	0-50A	0-100A	0-150A	
	Power	0-1.8kW	0-3kW	0-5kW	0-10kW	0-15KW	
Display mode		4.3-inch color LCD					
Measurement error (readback accuracy)	Voltage	≤0.05%Umax, resolution 0.01V					
	Current	≤0.1%Imax, resolution 0.01A (>1000A, 0.1A)					
	Power	≤1%Pmax, resolution 0.001kW (>100kW, 0.01kW)					
Ripple and Noise 20Hz-20MHz	Vrms	60mV					
	Vpp	450mV					
Load effect		Voltages≤0.01%Umax, currents≤0.05%Imax					
Power effect		Voltages≤0.01%Umax, currents≤0.01%Imax					
Transient response time		≤2ms					
Maximum lead drop compensation		6.5V					
Communication control interface		Standard: RS232, RS485, CAN, and LAN, optional: GPIB, analog port, and USB					
Protection functions		Input undervoltage protection, short-circuit protection, reverse connection protection, output overvoltage and current-limiting protection, overheating protection, and S-terminal compensation function.					
Parallel connection function		It supports multiple units for parallel output to expand power/current range.					
Working environment		Temperature 0-40℃; Humidity 20-90%RH					
Dimensions(W×H×D mm)		440×133×350			440×133×600		
Weight		16kg			17kg	27kg	37kg

Any changes to the above parameter specifications will not be notified separately.

Specifications

Model		AN53500-40(F)	AN53500-80(F)	AN53500-120(F)
Input	Voltage	Three-phase three-wire+PE, 340V-420VAC		
	Frequency	47-63Hz		
Output	Voltage	0-500V		
	Current	0-40A	0-80A	0-120A
	Power	0-5kW	0-10kW	0-15kW
Display mode		4.3-inch color LCD		
Measurement error (readback accuracy)	Voltage	$\leq 0.05\%U_{max}$, resolution 0.01V		
	Current	$\leq 0.1\%I_{max}$, resolution 0.01A (>1000A, 0.1A)		
	Power	$\leq 1\%P_{max}$, resolution 0.001kW (>100kW, 0.01kW)		
Ripple and Noise 20Hz-20MHz	Vrms	80mV		
	Vpp	700mV		
Load effect		Voltage $\leq 0.01\%U_{max}$, current $\leq 0.05\%I_{max}$		
Power effect		Voltage $\leq 0.01\%U_{max}$, current $\leq 0.01\%I_{max}$		
Transient response time		$\leq 2ms$		
Maximum lead drop compensation		25V		
Communication control interface		Standard: RS232, RS485, CAN, and LAN, optional: GPIB, analog port, and USB		
Protection functions		Input undervoltage protection, short-circuit protection, reverse connection protection, output overvoltage and current-limiting protection, overheating protection, and S-terminal compensation function.		
Parallel connection function		It supports multiple units for parallel output to expand power/current range.		
Working environment		Temperature 0-40℃; Humidity 20-90%RH		
Dimensions(W×H×D mm)		440×133×600		
Weight		17kg	27kg	37kg

Any changes to the above parameter specifications will not be notified separately.

Model		AN53750-20(F)	AN53750-40(F)	AN53750-60(F)
Input	Voltage	Three-phase three-wire+PE, 340V-420VAC		
	Frequency	47-63Hz		
Output	Voltage	0-750V		
	Current	0-20A	0-40A	0-60A
	Power	0-5kW	0-10kW	0-15kW
Display mode		4.3-inch color LCD		
Measurement error (readback accuracy)	Voltage	$\leq 0.05\%U_{max}$, resolution 0.01V		
	Current	$\leq 0.1\%I_{max}$, resolution 0.01A (>1000A, 0.1A)		
	Power	$\leq 1\%P_{max}$, resolution 0.001kW (>100kW, 0.01kW)		
Ripple and Noise 20Hz-20MHz	Vrms	200mV		
	Vpp	800mV		
Load effect		Voltage $\leq 0.01\%U_{max}$, current $\leq 0.05\%I_{max}$		
Power effect		Voltage $\leq 0.01\%U_{max}$, current $\leq 0.01\%I_{max}$		
Transient response time		$\leq 2ms$		
Maximum lead drop compensation		25V		
Communication control interface		Standard: RS232, RS485, CAN, and LAN, optional: GPIB, analog port, and USB		
Protection functions		Input undervoltage protection, short-circuit protection, reverse connection protection, output overvoltage and current-limiting protection, overheating protection, and S-terminal compensation function.		
Parallel connection function		It supports multiple units for parallel output to expand power/current range.		
Working environment		Temperature: 0-40℃; Humidity: 20%-90%RH		
Dimensions(W×H×D mm)		440×133×595		
Weight		17kg	27kg	37kg

Any changes to the above parameter specifications will not be notified separately.

Specifications

Model		AN531000-40(F)	AN531500-40(F)	AN532250-20(F)
Input	Voltage	Three-phase three-wire+PE, 340V-420VAC		
	Frequency	47-63Hz		
Output	Voltage	0-1,000V	0-1,500V	0-2,250V
	Current	0-40A		0-20A
	Power	0-10kW	0-15kW	0-15kW
Measurement error (readback accuracy)	Voltage	$\leq 0.05\%U_{max}$, resolution 0.01V		
	Current	$\leq 0.1\%I_{max}$, resolution 0.01A (>1000A, 0.1A)		
	Power	$\leq 1\%P_{max}$, resolution 0.001kW (>100kW, 0.01kW)		$\leq 3\%P_{max}$, resolution 0.001kW(>100kW, 0.01kW)
Ripple and Noise 20Hz-20MHz	Vrms	350mV	400mV	500mV
	Vpp	1600mV	2400mV	2800mV
Load effect		Voltages $\leq 0.01\%U_{max}$, currents $\leq 0.05\%I_{max}$		
Power effect		Voltages $\leq 0.01\%U_{max}$, currents $\leq 0.01\%I_{max}$		
Transient response time		$\leq 2ms$		
Maximum load drop compensation		25V		28.5V
Communication control interface		Standard: RS232, RS485, CAN, and LAN, optional: GPIB, analog port, and USB		
Protection functions		Input undervoltage protection, short-circuit protection, reverse connection protection, output overvoltage and current-limiting protection, overheating protection, and S-terminal compensation function.		
Parallel connection function		It supports multiple units for parallel output to expand power/current range.		
Working environment		Temperature 0-40℃; Humidity 20-90%RH		
Dimensions(W×H×D mm)		440×133×600		
Weight		27kg	37kg	

Any changes to the above parameter specifications will not be notified separately.

Ordering and function expansion

■ AN5380-120S(F): 80V/120A/1800W
 ■ AN5380-170S(F): 80V/170A/3000W
 ■ AN5380-170(F): 80V/170A/5000W
 ■ AN5380-340(F): 80V/340A/10000W
 ■ AN5380-510(F): 80V/510A/15000W
 ■ AN53300-15S(F): 300V/15A/1800W
 ■ AN53300-30S(F): 300V/30A/3000W
 ■ AN53300-50(F): 300V/50A/5000W
 ■ AN53300-100(F): 300V/100A/10000W
 ■ AN53300-150(F): 300V/150A/15000W
 ■ AN53500-40(F): 500V/40A/5000W

■ AN53500-80(F): 500V/80A/10000W
 ■ AN53500-120(F): 500V/120A/15000W
 ■ AN53750-20(F): 750V/20A/5000W
 ■ AN53750-40(F): 750V/40A/10000W
 ■ AN53750-60(F): 750V/60A/15000W
 ■ AN531000-40(F): 1000V/40A/10000W
 ■ AN531500-40(F): 1500V/40A/15000W
 ■ AN532250-20(F): 2250V/20A/15000W

■ It supports multiple units for parallel output to expand power/current range.