

The Best Choice for Grid Abnormal Simulation

Providing clean sine wave AC power, the AFC series allows users to simulate all sorts of utility grid voltage and frequency. The new AFC series features upgraded appearance design and user interface for a more intuitive control. It provides measurements of voltage, current, frequency and power factor. Moreover, the built-in hot key function allows quick memory recall and easy voltage and frequency setting.



Easy-to-use HMI

User-friendly Design, Making Operations More Efficient



One-touch Control

Fast Switching, Meeting Diverse Testing Needs



High Overload Capability

Easy to Activate Products that Require High Activation Current

■ 10" Intuitive Touch Screen Control

Users can easily read or set test parameters.

■ Applicable to 100% Unbalanced Load

Capable of delivering power to either three separate single-phase devices like EV Charger or one single three-phase device.

■ RS-232 & RS-485 Remote Interfaces

Users can set test parameters for single or multiple AFC series remotely.



AFC

series

AC Power Source/ Frequency Converter

Interfaces

Standard

RS-232

RS-485

QR Code



Product Info.



Product Video



Output Power

10kVA~2000kVA

RoHS Compliant



Providing clean sine wave AC power, the AFC series allows users to simulate all sorts of utility grid voltage and frequency for export product testing or operation of imported equipment. With a brand new appearance design, the new AFC series has not only improved electronic performance but also upgraded its user interface with 7" or 10" touch screen as well as RS-232 and RS-485 for more intuitive control. The AFC series now provides measurements of voltage, current, frequency and power factor. The built-in hot key function allows quick memory recall and easy voltage and frequency setting.

AFC series can simulate standard or abnormal voltage and frequency status. The maximum output power is up to 2000kVA in one unit instead of parallel. The output voltage range is 0-310V, and the output frequency is adjustable between optional 45-65Hz continuously, and optional 45-65Hz, 100Hz / 120Hz / 200Hz / 240Hz / 400Hz. This series provides pure sine wave output, with single and three-phase output models which are suitable for various industries including home appliances, electrical electronics and medical equipment.

Best Solution for Voltage and Frequency Conversions



Variable Transformer + MG set

AFC series

Control/Operation	Simple with Limited Functions	Intuitive HMI & Touch Screen
Waveform Simulation	V & Hz Adjustable	Power Disturbance Simulations & Other Programmable Features Available
Remote Control/ Measurement	Measurement only	Measurement + Remote Control
Reliability	High	High
Applications	Basic Power Conversion	Basic to Sophisticated Application

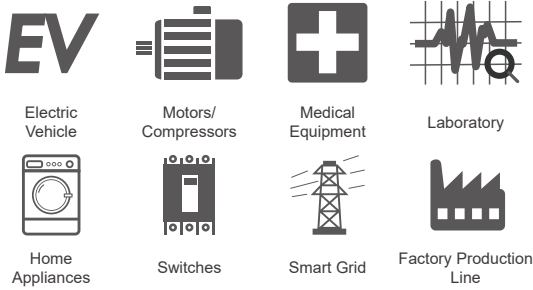
Unlike variable transformers, AFC series offers precise control over voltage, frequency, and power conditions through a user-friendly interface. With lower THD for cleaner waveforms, it ensures more accurate test results, making it ideal for various applications from basic to advanced simulations.

Overload Capability (Opt.)



An electric-motor-type UUT (Unit under Test), such as motor, compressor or water pump, generates great activation current when activating. As a result, users need to purchase a power supply with much higher capacity than the UUT itself. AFC series has an optional overload capability that can endure/achieve 200% overload capability, easy to activate products of electric motor type that require high activation current.

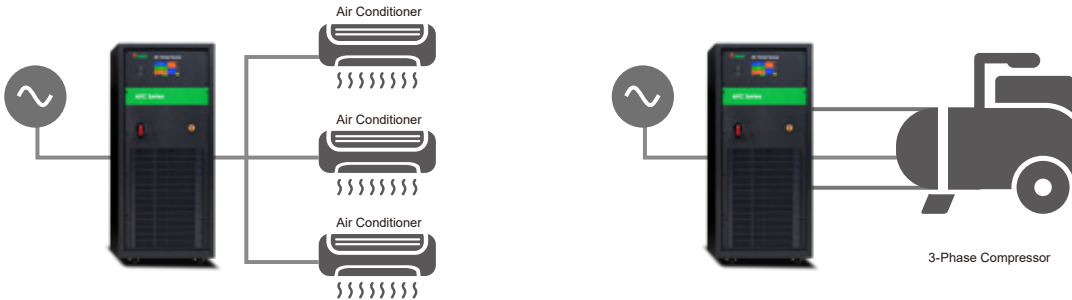
Ideal Power Source for Various Industries



The AFC series AC power source is highly reliable and easy to operate, and it has been widely applied in production line, quality assurance and design verification. The multiple levels of frequency and wide range of output voltage is ideal for applications requiring voltage and frequency conversion.

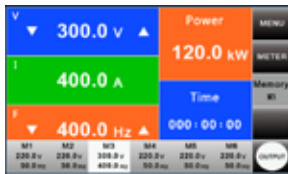
The unit can also be applied as isolation between DUT and the grid to reduce the interference from each side. These features make the AFC series ideal for home appliance, EMC chamber, motor and electronic industries.

Applicable to 100% Unbalanced Load



The AFC series is reliable for testing home appliances, motors, and compressors in production lines or laboratories. It can simulate different voltages and frequencies found in various countries to confirm the DUT's reliability. AFC series can handle unbalanced three-phase loads and connect to single-phase or three-phase loads simultaneously.

Friendly UI and Hot Key Group



6 hot key group



Meter page(L-N)



Meter page(L-L)



Voltage setting page

The AFC series features a large touchscreen for precise parameter adjustments and remote control via RS-232 and RS-485 interfaces. The display provides real-time monitoring of voltage, current, and power factor, with six customizable hotkeys for quick access to common settings. Additionally, the AFC series offers effortless switching between phase-to-phase and phase-to-neutral connections with a single click.

SPECIFICATIONS

AFC Series Single-Phase Output (5kVA-30kVA)

Model	AFC-11005-E	AFC-11010	AFC-11015	AFC-11030
INPUT				
Phase	1Ø / 2 Wire + G			
Voltage ^{*1}	220V±15%			
Frequency	47- 63Hz			
Max. Current ^{*2}	41.8A	74A	111A	222A
Power Factor	≥ 0.8 (Max. Power)		≥ 0.85 (Max. Power)	
OUTPUT				
Power (VA)	5kVA	10kVA	15kVA	30kVA
Phase	1Ø / 2 Wire + G			
Voltage Ranges	Low(V)	5V-150.0V (L-N)		
	High(V)	10V-300.0V(L-N)		
Voltage Resolution	0.1V			
Voltage Accuracy	0.2% F.S.+4 counts		0.5% F.S.+4 counts	
Frequency Range ^{*3}	Standard:47Hz - 63Hz;50Hz;60Hz Option: 2&4 times frequency;400Hz		Standard : 45-65Hz Option : 45-65Hz,100Hz/120Hz/200Hz/240Hz/400Hz	
Frequency Resolution	0.1Hz			
Frequency Accuracy	±0.1% F.S.		±0.02% F.S.	
Max. Current	Low(A)	41.7A	83.3A	125A
	High(A)	20.8A	41.7A	62.5A
Line Regulation	< 1%			
Load Regulation	< 1% (Resistive Load)			
Total Harmonic Distortion ^{*4}	≤ 2% (Resistive Load)			
Response Time	≤ 2ms			
MEASUREMENT				
Voltage Range	0V-310.0V			
Voltage Resolution	0.1V			
Voltage Accuracy	0.2% F.S.+4counts		0.5% F.S.+4counts	
Frequency Range	45-400Hz			
Frequency Resolution	0.1Hz		0.01Hz	
Frequency Accuracy	±0.1% F.S.		±0.02% F.S.	
Current Range(RMS)	0-250A			
Current Resolution(RMS)	0.01A		0.1A	
Current Accuracy(RMS)	0.2% F.S.+4counts		0.5% F.S.+4counts	
Power Range	0 - 5kW	0 - 10kW	0 - 15kW	0 - 30kW
Power Resolution	0.01kW		0.1kW	
Power Accuracy	0.3% F.S.+4counts		1% F.S.+6counts	
GENERAL				
Efficiency	≥ 80% at Max. Power		≥ 85% at Max. Power	
HMI	Digital LED Display		7" Touch Screen	
Memories	-		6 sets (M1/M2/M3/M4/M5/M6)	
Protection	Input : N.F.B, Over Voltage, Under Voltage, Output : Over Voltage, Over Current, Over Temperature		Input : N.F.B, Over Voltage, Under Voltage, Output : Over Voltage, Over Current, Over Temperature	
Remote Interface	-		Standard : RS-232 &RS-485	
Operating Temperature	0°C ~ 45°C			
Humidity	0-90% (Non condensing)			
Altitude	< 1,500m			
Dimensions (H x W x D) ^{*5}	720 x 430 x 520 mm (including wheels)	1045 x 600 x 800 mm (including wheels)		1440 x 600 x 800 mm (including wheels)
	28.3x 16.9 x 20.4 inch (including wheels)	41.1x 23.6 x 31.5 inch (including wheels)		56.7x 23.7 x 31.5 inch (including wheels)
Weight ^{*5}	89 kg	210 kg	240 kg	330 kg
	196.2 lbs	462.9 lbs	529.1 lbs	727.5 lbs

*1 Please contact us for other input voltage specifications. *2 The max. current is based on rated input voltage of 220V minus 15%.

*3 For frequency option, please contact us for output power characteristic curve. *4 When the output voltage is at Low : 90-140V or High 180-280V with load power factor of 1.

*5 Dimensions and weight are for input voltage 220V. Please contact us for dimensions and weight for other input voltage.

* All specifications are subject to change without notice. The specifications are tested at ambient temperature of 25°C ± 5°C .

SPECIFICATIONS

AFC Series Single-Phase Output (10kVA-120kVA)

Model	AFC-31010	AFC-31015	AFC-31030	AFC-31045	AFC-31060	AFC-31080	AFC-31100	AFC-31120	
INPUT									
Phase	3Ø / 3 Wire + G								
Voltage ^{*1}	380VAC ±15% (option: 220V / 208VAC)			380VAC ±15% (option: 480VAC)					
Frequency	47-63Hz								
Max. Current ^{*2}	22A	33A	66A	99A	132A	197.4A	246.7A	296.1A	
Power Factor	≥ 0.9 (Max. Power)					≥ 0.85 (Max. Power)			
OUTPUT									
Power (VA)	10kVA	15kVA	30kVA	45kVA	60kVA	80kVA	100kVA	120kVA	
Phase	1Ø / 2 Wire + G								
Voltage Ranges	Low(V) 0V-155.0V (L-N)								
	High(V) 0V-310.0V (L-N)								
Voltage Resolution	0.1V								
Voltage Accuracy	0.5% F.S.+4counts								
Frequency Range ^{*3}	Standard : 45-65Hz Option : 45-65Hz, 100Hz / 120Hz / 200Hz / 240Hz / 400Hz								
Frequency Resolution	0.01Hz								
Frequency Accuracy	±0.02% F.S.								
Max. Current	Low(A)	83.3A	125A	250A	375A	500A	666.7A	833.3A	1000A
	High(A)	41.7A	62.5A	125A	187.5A	250A	333.3A	416.7A	500A
Line Regulation	< 1%								
Load Regulation	≤ 1% (Resistive Load)								
Total Harmonic Distortion ^{*4}	≤ 2% (Resistive Load)								
Response Time	≤ 2ms								
MEASUREMENT									
Voltage Range	0V-310.0V								
Voltage Resolution	0.1V								
Voltage Accuracy	0.5% F.S.+4counts								
Frequency Range	45-400Hz								
Frequency Resolution	0.01Hz								
Frequency Accuracy	±0.02% F.S.								
Current Range(RMS)	0 - 83.3A	0 - 125A	0 - 250A	0 - 375A	0 - 500A	0 - 666.7A	0 - 833.3A	0 - 1000A	
Current Resolution(RMS)	0.1A								
Current Accuracy(RMS)	0.5% F.S.+4counts								
Power Range	0 - 10kW	0 - 15kW	0 - 30kW	0 - 45kW	0 - 60kW	0 - 80kW	0 - 100kW	0 - 120kW	
Power Resolution	0.1kW								
Power Accuracy	1% F.S.+6counts								
GENERAL									
Efficiency	≥ 90% at Max. Power					≥ 85% at Max. Power			
HMI	7" Touch Screen			10" Touch Screen					
Memories	6 sets (M1/M2/M3/M4/M5/M6)								
Protection	Input : N.F.B, Over Voltage, Under Voltage Output : Over Voltage, Over Current, Over Temperature								
Remote Interface	Standard : RS-232 &RS-485								
Operating Temperature	0°C ~45°C								
Humidity	0-90% (Non condensing)								
Altitude	< 1,500m								
Dimensions (H x W x D) ^{*5}	1045 x 600 x 800 mm (including wheels)		1440 x 600 x 800 mm (including wheels)	1645 x 800 x 800 mm (including wheels)		1800 x 1050 x 950 mm		1900 x 1150 x 1200 mm	
	41.1 x 23.6 x 31.5 inch (including wheels)		56.7 x 23.6 x 31.5 inch (including wheels)	64.8 x 31.5 x 31.5 inch (including wheels)		70.9 x 41.3 x 38.2 inch		74.8 x 45.3 x 48.0 inch	
Weight ^{*5}	225kg	270kg	440kg	560kg	650kg	750kg	940kg	1100kg	
	496.1lbs	595.4lbs	970.2lbs	1234.8lbs	1433.3lbs	1653.8lbs	2072.7lbs	2425.5lbs	

*1 Please contact us for other input voltage specifications. *2 The max. current is based on a rated input voltage of 380V minus 15%. *3 For frequency option, please contact us for output power characteristic curve.

*4 When the output voltage is at Low : 90-140V or High 180-280V with load power factor of 1. *5 Dimensions and weight are for input voltage 220/380V. Please contact us for dimensions and weight for other input voltage.

* All specifications are subject to change without notice. The specifications are tested at ambient temperature of 25°C ± 5°C.

SPECIFICATIONS

AFC Series Three-Phase Output (5kVA-80kVA)

Model	AFC-33005	AFC-33010	AFC-33015	AFC-33030	AFC-33045	AFC-33060	AFC-33080
INPUT							
Phase	3Ø / 3 Wire + G						
Voltage ^{*1}	380Vac ±15% (option: 220 / 208VAC)				380Vac ±15% (option: 480VAC)		
Frequency	47-63Hz						
Max. Current ^{*2}	11A	22A	33A	66A	99A	132A	197.4A
Power Factor	≥ 0.9 Max. Power						≥ 0.85 Max. Power
OUTPUT							
Power (VA)	5kVA	10kVA	15kVA	30kVA	45kVA	60kVA	80kVA
Phase	3Ø / 4 Wire + G						
Voltage Ranges	Low(V)						
	High(V)						
Voltage Resolution	0.1V						
Voltage Accuracy	0.5% F.S.+4counts						
Frequency Range ^{*3}	Standard : 45-65Hz Option : 45-65Hz, 100Hz/120Hz/200Hz/240Hz/400Hz						
Frequency Resolution	0.1Hz						
Frequency Accuracy	±0.02% F.S.						
Max. Current	Low(A)						
	High(A)						
Line Regulation	≤ 1%						
Load Regulation	≤ 1% (Resistive Load)						
Total Harmonic Distortion ^{*4}	≤ 2% (Resistive Load)						
Response Time	≤ 2ms						
MEASUREMENT							
Voltage Range	0V-310.0V						
Voltage Resolution	0.1V						
Voltage Accuracy	0.5% F.S.+4counts						
Frequency Range	45-400Hz						
Frequency Resolution	0.01Hz						
Frequency Accuracy	±0.02% F.S.						
Current Range(RMS)	0 - 13.9A	0 - 27.8A	0 - 41.7A	0 - 83.3A	0 - 125A	0 - 166.7A	0 - 222.2A
Current Resolution(RMS)	0.1A						
Current Accuracy(RMS)	0.5% F.S.+4counts						
Power Range	0 - 5kW	0 - 10kW	0 - 15kW	0 - 30kW	0 - 45kW	0 - 60kW	0 - 80kW
Power Resolution	0.1kW						
Power Accuracy	1% F.S.+6counts						
GENERAL							
Efficiency	≥ 90% at Max. Power						≥ 85 % at Max. Power
HMI	7" Touch Screen				10" Touch Screen		
Memories	6 sets (M1/M2/M3/M4/M5/M6)						
Protection	Input : N.F.B, Over Voltage, Under Voltage Output : Over Voltage, Over Current, Over Temperature						
Remote Interface	Standard : RS-232 &RS-485						
Operating Temperature	0°C ~ 45°C						
Humidity	0-90% (Non condensing)						
Altitude	< 1,500m						
Dimensions (H x W x D) ^{*5}	1045 x 600 x 800 mm (including wheels)		1440 x 600 x 800 mm (including wheels)		1645 x 800 x 800 mm (including wheels)		1800 x 1050 x 970 mm
	41.1 x 23.6 x 31.5 inch (including wheels)		56.7 x 23.6 x 31.5 inch (including wheels)		64.8 x 31.5 x 31.5 inch (including wheels)		70.9x41.3x38.2 inch
Weight ^{*5}	205kg	255kg	295kg	390kg	540kg	650kg	1000kg
	452lbs	562.3lbs	650.5lbs	860lbs	1190.7lbs	1433.3lbs	2205lbs

*1 Please contact us for other input voltage specifications. *2 The max. current is based on a rated input voltage of 380V minus 15%.

*3 For frequency option, please contact us for output power characteristic curve. *4 When the output voltage is at Low : 90-140V or High 180-280V with load power factor of 1.

*5 Dimensions and weight are for input voltage 380V. Please contact us for dimensions and weight for other input voltage.

* All specifications are subject to change without notice. The specifications are tested at ambient temperature of 25°C ± 5°C .

SPECIFICATIONS

AFC Series Three-Phase Output (100kVA-640kVA)

Model	AFC-33100	AFC-33120	AFC-33160	AFC-33240	AFC-33300	AFC-33400	AFC-33500	AFC-33640
INPUT								
Phase	3 Ø / 3 Wire + G							
Voltage ^{*1}	380Vac ±15% (option: 480VAC)							
Frequency	47-63Hz							
Max. Current ^{*2}	246.7A	296.1A	394.7A	592.1A	740.2A	986.9A	1233.6A	1579A
Power Factor	≥ 0.85 (Max. Power)							
OUTPUT								
Power (VA)	100kVA	120kVA	160kVA	240kVA	300kVA	400kVA	500kVA	640kVA
Phase	3Ø / 4 Wire + G							
Voltage Ranges	0-155 V (L-N)							
	0-310 V (L-N)							
Voltage Resolution	0.1V							
Voltage Accuracy	0.5% F.S.+4 counts							
Frequency Range ^{*3}	Standard : 45-65Hz Option : 45-65Hz, 100Hz/120Hz/200Hz/240Hz/400Hz							
Frequency Resolution	0.1Hz							
Frequency Accuracy	±0.02% F.S							
Max. Current (RMS)	277.8A	333.3A	444.4A	666.7A	833.3A	1111.1A	1388.9A	1777.8A
	138.9A	166.7A	222.2A	333.3A	416.7A	555.6A	694.4A	888.9A
Line Regulation	≤ 1%							
Load Regulation	≤ 1% (Resistive Load)							
Total HarmonicDistortion(THD) ^{*4}	≤ 2% (Resistive Load)							
Response Time	≤ 2ms							
MEASUREMENT								
Voltage Range	0V-310.0V							
Voltage Resolution	0.1V							
Voltage Accuracy	0.5% F.S.+4 counts							
Frequency Range	45-400Hz							
Frequency Resolution	0.01Hz							
Frequency Accuracy	±0.02% F.S.							
Current Range(RMS)	0 - 277.8A	0 - 333.3A	0 - 444.4A	0 - 666.7A	0 - 833.3A	0 - 1111.1A	0 - 1388.9A	0 - 1777.8A
Current Resolution(RMS)	0.1A							
Current Accuracy(RMS)	0.5% F.S.+4counts							
Power Range	0 - 100kW	0 - 120kW	0 - 160kW	0 - 240kW	0 - 300kW	0 - 400kW	0 - 500kW	0 - 640kW
Power Resolution	0.1kW							
Power Accuracy	1% F.S.+6counts							
GENERAL								
Efficiency	≥ 85% at Max. Power							
HMI	10" Touch Screen							
Memories	6 sets (M1/M2/M3/M4/M5/M6)							
Protection	Input : N.F.B, Over Voltage, Under Voltage, Output : Over Voltage, Over Current, Over Temperature							
Remote Interface	Standard : RS-232 &RS-485							
Operating Temperature	0°C ~ 45°C							
Humidity	0-90% (Non condensing)							
Altitude	< 1,500m							
Dimensions (H x W x D) ^{*5}	1800 x 1050 x 970 mm	1900 x 1150 x 1200 mm			2050 x 3130 x 1200 mm	2050 x 3548x 1520 mm		2050 x 4716 x 1500 mm
	70.9 x 41.3 x 38.2 inch	74.8 x 45.3 x 48.8 inch			80.7 x 123.2 x 47.2 inch	80.7 x 139.7 x 59.8 inch		80.7 x 185.7 x 59 inch
Weight ^{*5}	1170kg	1450kg	1850kg	2800kg	3450kg	4450kg	5550kg	7800kg
	2579.8lbs	3197.3lbs	4079.3lbs	6174lbs	7607.25lbs	9812.25lbs	12237.8lbs	17199lbs

*1 Please contact us for other input voltage specifications.

*3 For frequency option, please contact us for output power characteristic curve.

*5 Dimensions and weight are for input voltage 380V. Please contact us for dimensions and weight for other input voltage.

*6 Please contact us for specifications

*2 The max. current is based on a rated input voltage of 380V minus 15%.

*4 When the output voltage is at Low : 90-140V or High 180-280V with load power factor of 1.

*All specifications are subject to change without notice. The specifications are tested at ambient temperature of 25°C ± 5°C .

ORDERING INFORMATION

AFC Series Single-Phase Output (10kVA-120kVA)

Model Number	Description
AFC-11005-E	High Power Programmable AC Power Source (5kVA/310V/47Hz-63Hz;50Hz;60Hz)
AFC-11010	High Power Programmable AC Power Source (10kVA/310V/45-65Hz)
AFC-11015	High Power Programmable AC Power Source (15kVA/310V/45-65Hz)
AFC-11030	High Power Programmable AC Power Source (30kVA/310V/45-65Hz)
AFC-31010	High Power Programmable AC Power Source (10kVA/310V/45-65Hz)
AFC-31015	High Power Programmable AC Power Source (15kVA/310V/45-65Hz)
AFC-31030	High Power Programmable AC Power Source (30kVA/310V/45-65Hz)
AFC-31045	High Power Programmable AC Power Source (45kVA/310V/45-65Hz)
AFC-31060	High Power Programmable AC Power Source (60kVA/310V/45-65Hz)
AFC-31080	High Power Programmable AC Power Source (80kVA/310V/45-65Hz)
AFC-31100	High Power Programmable AC Power Source (100kVA/310V/45-65Hz)
AFC-31120	High Power Programmable AC Power Source (120kVA/310V/45-65Hz)
AFC-001	45-65Hz, 100Hz/120Hz/200Hz/240Hz/400Hz
AFC-002	400Hz Fixed
AFC-006	Overload Capability 200% 2 sec, 150% 5 sec, 125% 15 sec ^{*1}
AFC-011	Remote Control Box
ACCS-001	USB to RS-485 converter +RS-232/RS-485 Cable M-F type (2M)
ACCS-002	USB to RS-232 converter +RS-232/RS-485 Cable M-F type (2M)
ACCS-003	RS-232/RS-485 Cable M-F type (2M)

AFC Three-Phase Output(10kVA-640kVA)

Model Number	Description
AFC-33005	High Power Programmable AC Power Source (5kVA/310V/45-65Hz)
AFC-33010	High Power Programmable AC Power Source (10kVA/310V/45-65Hz)
AFC-33015	High Power Programmable AC Power Source (15kVA/310V/45-65Hz)
AFC-33030	High Power Programmable AC Power Source (30kVA/310V/45-65Hz)
AFC-33045	High Power Programmable AC Power Source (45kVA/310V/45-65Hz)
AFC-33060	High Power Programmable AC Power Source (60kVA/310V/45-65Hz)
AFC-33080	High Power Programmable AC Power Source (80kVA/310V/45-65Hz)
AFC-33100	High Power Programmable AC Power Source (100kVA/310V/45-65Hz)
AFC-33120	High Power Programmable AC Power Source (120kVA/310V/45-65Hz)
AFC-33160	High Power Programmable AC Power Source (160kVA/310V/45-65Hz)
AFC-33240	High Power Programmable AC Power Source (240kVA/310V/45-65Hz)
AFC-33300	High Power Programmable AC Power Source (300kVA/310V/45-65Hz)
AFC-33400	High Power Programmable AC Power Source (400kVA/310V/45-65Hz)
AFC-33500	High Power Programmable AC Power Source (500kVA/310V/45-65Hz)
AFC-33640	High Power Programmable AC Power Source (640kVA/310V/45-65Hz)
AFC-001	45-65Hz, 100Hz/120Hz/200Hz/240Hz/400Hz
AFC-002	400Hz Fixed
AFC-006	Overload Capability 200% 2 sec, 150% 5 sec, 125% 15 sec ^{*1}
AFC-007	Input Voltage 208Vac
AFC-008	Input Voltage 480Vac
AFC-009	Input Voltage 220Vac
AFC-010	Input Voltage 400Vac
AFC-011	Remote Control Box
ACCS-001	USB to RS-485 converter +RS-232/RS-485 Cable M-F type (2M)
ACCS-002	USB to RS-232 converter +RS-232/RS-485 Cable M-F type (2M)
ACCS-003	RS-232/RS-485 Cable M-F type (2M)

*1 Please contact us for specifications.