ANEVL(F) Series Regenerative DC Electronic Load



Product Features /

- Regenerative power feedback returns energy to the utility grid during operation, improving energy efficiency and reducing operating costs.
- Wide operating range supports full-power operation under both high-voltage/low-current and low-voltage/high-current conditions.
- Power factor up to 0.99 at full load.
- Full-load AC current THD < 3%.
- Overall efficiency up to 95%.
- Active anti-islanding protection ensures safe and reliable operation.
- Supports CV, CC, CP, and CR operating modes to meet a wide range of testing requirements.
- 900-step sequence programming with a minimum dwell time of 1 ms and flexible programming configurations.
- High-accuracy voltage and current sensing ensures excellent output stability.
- Comprehensive protection functions safeguard both the power supply and the load under test.
- High-brightness color LCD with an intuitive user interface for easy operation.
- Supports parallel operation for flexible power expansion.

Orders and Function Expansion /

3U model:

- ANEVL100-170(F) 100V/170A /5kW
- ANEVL100-340(F) 100V/340A /10kW
- ANEVL100-510(F) 100V/510A /15kW
- ANEVL300-75(F) 300V/75A /5kW
- ANEVL300-150(F) 300V/150A /10kW
- ANEVL300-225(F) 300V/225A /15kW
- ANEVL300-225(F) 300V/225A /21kW
- ANEVL300-300(F) 300V/300A /30kW
- ANEVL500-40(F) 500V/40A /5kW
- ANEVL500-80(F) 500V/80A /10kW
- ANEVL500-120(F) 500V/120A /15kW
- ANEVL500-160(F) 500V/160A /21kW
- ANEVL500-240(F) 500V/240A /30kW
- ANEVL750-25(F) 750V/25A /5kW
- ANEVL750-50(F) 750V/50A /10kW
- ANEVL750-75(F) 750V/75A /15kW
- ANEVL750-120(F) 750V/120A /21kW
- ANEVL750-180(F) 750V/180A /30kW
- ANEVL1000-40(F) 1000V/40A /10kW
- ANEVL1000-80(F) 1000V/80A /21kW
- ANEVL1000-100(F) 1000V/100A /30kW
- ANEVL1500-40(F) 1500V/40A /15kW
- ANEVL1500-60(F) 1000V/60A /21kW
- ANEVL1500-80(F) 1500V/80A /30kW
- ANEVL2250-25(F) 2250V/25A /15kW
- ANEVL2250-50(F) 2250V/50A /21kW
- ANEVL2250-60(F) 2250V/60A /30kW

4U model:

- ANEVL80-680(F) 80V/680A/20kW
- ANEVL80-1020(F) 80V/1020A /30kW
- ANEVL300-450(F) 300V/450A/50kW
- ANEVL500-390(F) 500V/390A/50kW
- ANEVL750-300(F) 750V/300A/50kW
- ANEVL1000-150(F) 1000V/150A/50kW
- ANEVL1500-130(F) 1500V/130A/50kW
- ANEVL2250-100(F) 2250V/100A/50kW

Technical Specifications /

Product Model		ANEVL 100-170(F)	ANEVL 100-340(F)	ANEVL 100-510(F) (可定制600A)	ANEVL 300-75(F)	ANEVL 300-150(F)	ANEVL 300-225(F)	ANEVL 500-40(F)	ANEVL 500-80(F)	ANEVL 500-120(F)	ANEVL 750-25(F)
AC Parameters	Phases	Three-phase Three-wire +PE									
	Voltage	340V~480Vac									
	Frequency	50/60Hz									
	Power Factor	0.99@Rated Power									≥0.99
	Maximum Phase Current (Ms)	≤29A									
	Current THD	≤3%									
	Islanding Protection	Active Islanding Protection									
DC Load Parameters	Voltage	0~100Vdc	0~100Vdc	0~100Vdc	0~300Vdc	0~300Vdc	0~300Vdc	0~500Vdc	0~500Vdc	0~500Vdc	0~750Vdc
	Current	0~170A	0 ~ 340A	0 ~ 510A	0~75A	0~150A	0~225A	0~40A	0~80A	0~120A	0~25A
	Power	0 ~ 5kW	0 ~ 10kW	0 ~ 15kW	0 ~ 5kW	0 ~ 10kW	0 ~ 15kW	0 ~ 5kW	0 ~ 10kW	0 ~ 15kW	0 ~ 5kW
	Resistance	0.017~50Ω	0.008~50Ω	0.005~50Ω	0.2~150Ω	0.1~150Ω	0.066~150Ω	0.5~500Ω	0.25~500Ω	0.166~500Ω	1.2~750Ω
	Minimum Operating Voltage	2V@170A	2V@340A	2V@510A	6V@75A	6V@150A	6V@225A	10V@40A	10V@80A	10V@120A	10V@25A
Display Mode		4.3-inch color LCD									
Voltage Resolution		0.01V (0.1V when >1,000V)									
Current Resolution		0.01A (0.1A when >1,000A)									
Power Resolution		0.001kW (0.01kW when >100kW)									
Resistance Resolution		0.001Ω (0.01Ω when >100Ω, 0.1Ω when>1,000Ω)									
Setting Error (Programming Accuracy)	Voltage	≤0.05%F.S.									
	Current	≤0.1%F.S.									
	Power	≤0.2%FS									
	Resistance	≤ 0.3% of maximum resistance ± 0.1% of maximum current (note: applicable to feedback current above 2A)									
Measurement Error (Readback Accuracy)	Voltage	≤0.05%F.S.									
	Current	≤0.1%F.S.									
	Power	≤0.2%FS									
	Resistance	≤ 0.3% of maximum resistance ± 0.1% of maximum current (note: applicable to feedback current above 2A)									
Dynamic Response	Rise Rate (10%~90%△i)	0.01A/ms~170A/ms	0.01A/ms~340A/ms	0.01A/ms~510A/ms	0.01A/ms~75A/ms	0.01A/ms~150A/ms	0.01A/ms~225A/ms	0.01A/ms~40A/ms	0.01A/ms~80A/ms	0.01A/ms~120A/ms	0.01A/ms~25A/ms
	Fall Rate (10%~90%△i)	0.01A/ms~170A/ms	0.01A/ms~340A/ms	0.01A/ms~510A/ms	0.01A/ms~75A/ms	0.01A/ms~150A/ms	0.01A/ms~225A/ms	0.01A/ms~40A/ms	0.01A/ms~80A/ms	0.01A/ms~120/ms	0.01A/ms~25A/ms
	Minimum Rise Time	1ms	1ms	1ms	1ms	1ms	1ms	1ms	1ms	1ms	1ms
Temperature Drift	Voltage	≤100ppm/℃									
	Current	≤100ppm/℃									
Scope of OVP		0~110%F.S			110%F.S						
Communication Function		Standard: CAN/485/232/LAN port/USB optional: GPIB									
Protection Function		Input undervoltage protection, short-circuit protection, output overvoltage, current-limiting protection, internal overheating protection.									
Analog Interface (Optional)		Start, stop, alarm, 0-5V or 0-10V analog control output									
Other External Interfaces		Standard: Parallel Operation Port, Interlock Port									
Efficiency		≤92%			≤93%			≤94%			
Insulation Withstand Voltage	DC Negative Terminal to Ground	±400V DC			±400V DC			±1500V DC			
	DC Positive Terminal to Ground	+400V DC			+600V DC			+1800V DC			
	AC Input <->PE	2.5kV DC			2.5kV DC			2.5kV DC			
Operating Temperature		0~40℃									
Storage Temperature		-20~70℃									
Humidity		<80%, without condensation									
Volume	Enclosure Size(W*H*D mm)	444*132.5*705.5									
	Overall Dimensions(W*H*D mm)	444*132.5*768									
Weight		5kW: ≤23kg 10kW: ≤31kg 15kW: ≤38kg									
Notes		1.Programming accuracy/read-back accuracy test condition (25℃±5℃)									

*The above specifications are subject to change without notice.

Technical Specifications /

Product Model		ANEVL 750-50(F)	ANEVL 750-75(F)	ANEVL 1000-40(F)	ANEVL 1000-75(F)	ANEVL 1500-40(F)	ANEVL 2250-25(F)	ANEVL 300-225P(F)	ANEVL 500-160(F)	ANEVL 750-120(F)	ANEVL 1000-80(F)
AC Parameters	Phases	Three-phase Three-wire +PE									
	Voltage	340V~480Vac									
	Frequency	50/60Hz									
	Power Factor	≥0.99		0.99@ Rated Power			≥0.99	0.99@ Rated Power			≥0.99
	Maximum Phase Current (Ms)	≤29A						≤56A			
	Current THD	≤3%									
	Islanding Protection	Active Islanding Protection									
DC Load Parameters	Voltage	0~750Vdc	0~750Vdc	0~1000Vdc	0~1000Vdc	0~1500Vdc	0~2250Vdc	0~300Vdc	0~500Vdc	0~750Vdc	0~1000Vdc
	Current	0~50A	0~75A	0~40A	0~75A	0~40A	0~25A	0~225A	0~160A	0~120A	0~80A
	Power	0~10kW	0~15kW	0~10kW	0~15kW	0~15kW	0~15kW	0~21kW	0~21kW	0~21kW	0~21kW
	Resistance	0.6~750Ω	0.4~750Ω	0.85~1000Ω	0.453~1000Ω	1.25~1500Ω	2.4~2250Ω	0.66~150Ω	0.125~500Ω	0.250~750Ω	0.425~1000Ω
	Minimum Operating Voltage	10V@25A	10V@25A	20V@40A	25V@75A	30V@40A	40V@25A	6V@225A	10V@160A	15V@120A	25V@80A
Display Mode		4.3-inch color LCD									
Voltage Resolution		0.01V (0.1V when >1,000V)									
Current Resolution		0.01A (0.1A when >1,000A)									
Power Resolution		0.001kW (0.01kW when >100kW)									
Resistance Resolution		0.001Ω (0.01Ω when >100Ω, 0.1Ω when>1,000Ω)									
Setting Error (Programming Accuracy)	Voltage	≤0.05%F.S.									
	Current	≤0.1%F.S.									
	Power	≤0.2%FS									
	Resistance	≤ 0.3% of maximum resistance ± 0.1% of maximum current (note: applicable to feedback current above 2A)									
Measurement Error (Readback Accuracy)	Voltage	≤0.05%F.S.									
	Current	≤0.1%F.S.									
	Power	≤0.2%FS									
	Resistance	≤ 0.3% of maximum resistance ± 0.1% of maximum current (note: applicable to feedback current above 2A)									
Dynamic Response	Rise Rate (10%~90%△i)	0.01A/ms~50A/ms	0.01A/ms~75A/ms	0.01A/ms~40A/ms	0.01A/ms~75A/ms	0.01A/ms~40A/ms	0.01A/ms~25A/ms	0.01A/ms~225A/ms	0.01A/ms~160A/ms	0.01A/ms~120A/ms	0.01A/ms~80A/ms
	Fall Rate (10%~90%△i)	0.01A/ms~50A/ms	0.01A/ms~75/ms	0.01A/ms~40A/ms	0.01A/ms~75A/ms	0.01A/ms~40A/ms	0.01A/ms~25A/ms	0.01A/ms~225A/ms	0.01A/ms~160A/ms	0.01A/ms~120A/ms	0.01A/ms~80A/ms
	Minimum Rise Time	1ms	1ms	1ms	1ms	1ms	1ms	1ms	1ms	1ms	1ms
Temperature Drift	Voltage	≤100ppm/℃									
	Current	≤100ppm/℃									
Scope of OVP		110%F.S									
Communication Function		Standard: CAN/485/232/LAN port/USB optional: GPIB									
Protection Function		Input undervoltage protection, short-circuit protection, output overvoltage, current-limiting protection, internal overheating protection.									
Analog Interface (Optional)		Start, stop, alarm, 0-5V or 0-10V analog control output									
Other External Interfaces		Standard: Parallel Operation Port, Interlock Port									
Efficiency		≤94%		≤94%	≤93%	≤94%	≤94%	≤93.5%	≤94.5%	≤94.5%	≤94.5%
Insulation Withstand Voltage	DC Negative Terminal to Ground	±1500V DC		±1500V DC			±1500V DC	±400V DC	±1500V DC	±1500V DC	±1500V DC
	DC Positive Terminal to Ground	+1800V DC		+1800V DC			+2000V DC	+600V DC	+1800V DC	+1800V DC	+1800V DC
	AC Input <->PE	2.5kV DC		2.5kV DC			2.5kV DC	2.5kV DC	2.5kV DC	2.5kV DC	2.5kV DC
Operating Temperature		0~40℃									
Storage Temperature		-20~70℃									
Humidity		<80%, without condensation									
Volume	Enclosure Size(W*H*D mm)	444*132.5*705.5									
	Overall Dimensions(W*H*D mm)	444*132.5*768									
Weight		5kW: ≤23kg 10kW: ≤31kg 15kW: ≤38kg					15kW≤38kg	≤40kg	≤32kg		
Notes		1.Programming accuracy/read-back accuracy test condition (25℃±5℃)									

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Technical Specifications /

Product Model		ANEVL 500-80P(F)	ANEVL 500-240(F)	ANEVL 1500-80(F)	ANEVL 1000-100(F)	ANEVL 750-60(F)	ANEVL 750-180(F)	ANEVL 1500-60(F)	ANEVL 300-300(F)	ANEVL 2250-60(F)	ANEVL 80-680(F)
AC Parameters	Phases	Three-phase Three-wire +PE									
	Voltage	342V~528Vac		340V~480Vac		340V~480Vac		340V~480Vac		340V~480Vac	
	Frequency	45~66Hz		50/60Hz		50/60Hz		50/60Hz		50/60Hz	
	Power Factor	0.99@		0.99@Full-power		0.99@Rated Power		≥0.99		0.99@Rated Power	
	Maximum Phase Current (Ms)	≤56A									
	Current THD	≤3%									
	Islanding Protection	Active Islanding Protection									
DC Load Parameters	Voltage	0~500Vdc	0~500Vdc	0~1500Vdc	0~1000Vdc	0~750Vdc	0~750Vdc	0~1500Vdc	0~300Vdc	0~2250Vdc	0~80Vdc
	Current	0~80A	0~240A	0~80A	0~100A	0~60A	0~180A	0~60A	0~300A	0~60A	0~680A
	Power	0~10kW	0~30kW	0~30kW	0~30kW	0~10kW	0~30kW	0~21kW	0~30kW	0~30kW	0~20kW
	Resistance	0.250~500Ω	0.83~500Ω	0.625~1500Ω	0.340~1000Ω	0.50~750Ω	0.166~750Ω	0.714~1500Ω	0.050~150Ω	1.0~2250Ω	0.001~40Ω
	Minimum Operating Voltage	10V@80A	10V@240A	35V@80A	25V@100A	15V@60A	15V@180A	35V@60A	6V@300A	45V@60A	1.6V@680A
Display Mode		4.3-inch color LCD									
Voltage Resolution		0.01V (0.1V when >1,000V)									0.01V
Current Resolution		0.01A (0.1A when >1,000A)									
Power Resolution		0.001kW (0.01kW when >100kW)									0.001kW
Resistance Resolution		0.001Ω (0.01Ω when >100Ω, 0.1Ω when>1,000Ω)									0.001Ω
Setting Error (Programming Accuracy)	Voltage	≤0.05%F.S.									
	Current	≤0.1%F.S.									
	Power	≤0.2%FS									
	Resistance	≤ 0.3% of maximum resistance ± 0.1% of maximum current (note: applicable to feedback current above 2A)									
Measurement Error (Readback Accuracy)	Voltage	≤0.05%F.S.									
	Current	≤0.1%F.S.									
	Power	≤0.2%FS									
	Resistance	≤ 0.3% of maximum resistance ± 0.1% of maximum current (note: applicable to feedback current above 2A)									
Dynamic Response	Rise Rate (10%~90%△i)	0.01A/ms~80A/ms	0.01A/ms~240A/ms	0.01A/ms~80A/ms	0.01A/ms~100A/ms	0.01A/ms~60A/ms	0.01A/ms~180A/ms	0.01A/ms~60A/ms	0.01A/ms~300A/ms	0.01A/ms~60A/ms	0.01A/ms~680A/ms
	Fall Rate (10%~90%△i)	0.01A/ms~80A/ms	0.01A/ms~240A/ms	0.01A/ms~80A/ms	0.01A/ms~100A/ms	0.01A/ms~60A/ms	0.01A/ms~180A/ms	0.01A/ms~60A/ms	0.01A/ms~300A/ms	0.01A/ms~60A/ms	0.01A/ms~680A/ms
	Minimum Rise Time	1ms	1ms	1ms	1ms	1ms	1ms	1ms	1ms	1ms	1ms
Temperature Drift	Voltage	≤100ppm/℃									
	Current	≤100ppm/℃									
Scope of OVP		110%F.S									
Communication Function		Standard: CAN/485/232/LAN port/USB optional: GPIB									
Protection Function		Input undervoltage protection, short-circuit protection, output overvoltage, current-limiting protection, internal overheating protection.									
Analog Interface (Optional)		Start, stop, alarm, 0-5V or 0-10V analog control output									
Other External Interfaces		Standard: Parallel Operation Port, Interlock Port									
Efficiency		≤94.5%	≤94.5%	≤94.5%	≤93.5%	≤94.5%	≤94.5%	≤94.5%	≤93.5%	≤94.5%	≤94%
Insulation Withstand Voltage	DC Negative Terminal to Ground	±1500V DC	±1500V DC	±1500V DC	±1500V DC	±1500V DC	±1500V DC	±1500V DC	±400V DC	±1500V DC	±400V DC
	DC Positive Terminal to Ground	+1800V DC	+1800V DC	+1800V DC	+1800V DC	+1800V DC	+1800V DC	+1800V DC	+600V DC	+1800V DC	+400V DC
	AC Input <->PE	2.5kV DC	2.5kV DC	2.5kV DC	2.5kV DC	2.5kV DC	2.5kV DC	2.5kV DC	2.5kV DC	2.5kV DC	2.5kV DC
Operating Temperature		0~40℃									
Storage Temperature		-20~70℃									
Humidity		<80%,without condensation									
Volume	Enclosure Size(W*H*D mm)	444*132.5*705.5								444*132.5*705.5	444*177*705.5
	Overall Dimensions(W*H*D mm)	444*132.5*768								444*132.5*768	444*177*795.5
Weight		10kW:≤24kg 30kW:≤40kg		30kW:≤40kg		10kW:≤24kg 30kW:≤40kg		≤40kg	30kW≤40kg	30kW: ≤40kg	10kW: ≤32.2kg 20kW: ≤41kg
Notes		1.Programming accuracy/read-back accuracy test condition (25℃±5℃); 2.Time required for the load to change from 100% to 50% or in reverse, and for the output voltage to return to within "rated value±0.75%"						1.Programming accuracy/read-back accuracy test condition (25℃±5℃);			

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Technical Specifications /

Product Model		ANEVL 300-450(F)	ANEVL 1000-150(F)	ANEVL 500-390(F)	ANEVL 1500-130(F)	ANEVL 750-300(F)	ANEVL 2250-100(F)	
AC Parameters	Phases	Three-phase Three-wire +PE						
	Voltage	340V~480Vac						
	Frequency	50/60Hz						
	Power Factor	0.99@ Rated Power						
	Maximum Phase Current (Ms)	≤94A						
	Current THD	≤3%						
	Islanding Protection	Active Islanding Protection						≤56A
DC Load Parameters	Voltage	0~300VDC	0~1000VDC	0~500VDC	0~1500VDC	0~750VDC(expandable to 800V)	0~2250VDC	
	Current	0~450A	0~150A	-390A~390A	0~130A	0~300A	0~100A	
	Power	0 ~ 50kW	0 ~ 50kW	-50kW ~ 50kW	0 ~ 50kW	0 ~ 50kW	0 ~ 50kW	0~80Vdc
	Resistance	0.014~300Ω	0.2~1000Ω	0.026~500Ω	0.308~1500Ω	0.05~750Ω	0.6~2250Ω	0~1020A
	Minimum Operating Voltage	6V@450A	30V@150A	10V@390A	40V@130A	15V@300A	60V@100A	0~30kW
Display Mode		4.3-inch color LCD						0.002~40Ω
Voltage Resolution		0.01V (0.1V when >1,000V)						
Current Resolution		0.01A (0.1A when >1,000A)						
Power Resolution		0.001kW (0.01kW when >100kW)						0.01V
Resistance Resolution		-						
Setting Error (Programming Accuracy)	Voltage	≤0.05%F.S.						0.001kW
	Current	≤0.1%F.S.						0.001Ω
	Power	≤0.2%FS						
	Resistance	None						≤0.3% of maximum resistance ± 0.1% of maximum current (Note: applicable for feedback current greater than 2 A)
Measurement Error (Readback Accuracy)	Voltage	≤0.05%F.S.						
	Current	≤0.1%F.S.						
	Power	≤0.2%FS						
	Resistance	None						≤0.3% of maximum resistance ± 0.1% of maximum current (Note: applicable for feedback current greater than 2 A)
Dynamic Response	Rise Rate (10%~90%△i)	0.01A/ms~450A/ms	0.01A/ms~150A/ms	0.01A/ms~390A/ms	0.01A/ms~130A/ms	0.01A/ms~300A/ms	0.01A/ms~100A/ms	0.01A/ms~1020A/ms
	Fall Rate (10%~90%△i)	0.01A/ms~450A/ms	0.01A/ms~150A/ms	0.01A/ms~390A/ms	0.01A/ms~130A/ms	0.01A/ms~300A/ms	0.01A/ms~100A/ms	0.01A/ms~1020A/ms
	Minimum Rise Time	1ms	1ms	1ms	1ms	1ms	1ms	1ms
Temperature Drift	Voltage	≤100ppm/℃						
	Current	≤100ppm/℃						
Scope of OVP		110%F.S						
Communication Function		Standard: CAN/485/232/LAN port/USB optional: GPIB						
Protection Function		Input undervoltage protection, short-circuit protection, output overvoltage, current-limiting protection, internal overheating protection.						
Waveform Editing (Sequence)					Conventional waveform editing function with integrated test standards and graphical user interface		Conventional waveform editing function with integrated test standards and graphical user interface	
Analog Interface (Optional)		Start, stop, alarm, 0-5V or 0-10V analog control output						
Other External Interfaces		Standard: Parallel Operation Port, Interlock Port						
Efficiency		≤94%	≤94%	≤95%	≤95%	≤95%	≤95	
Insulation Withstand Voltage	DC Negative Terminal to Ground	±400V DC	±1500V DC	±1500V DC	±1500V DC	±1500V DC	±1500V DC	
	DC Positive Terminal to Ground	+ 600V DC	+ 1800V DC	+ 1800V DC	+ 1800V DC	+ 1800V DC	+ 2000V DC	≤94%
	AC Input <->PE	2.5kV DC	2.5kV DC	2.5kV DC	2.5kV DC	2.5kV DC	2.5kV DC	±400V DC
Operating Temperature		0~40℃						+ 400V DC
Storage Temperature		-20~70℃						2.5kV DC
Humidity		<80%,without condensation						
Volume	Enclosure Size(W*H*D mm)	444*177*705.5						444*177*705.5
	Overall Dimensions(W*H*D mm)	444*177*805						444*177*795.5
Weight		≤53kg				50kW≤53kg		30kW:≤53.2kg 20kW:≤41kg
Notes		1. Programming accuracy/read-back accuracy test condition (25℃±5℃)						

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