

PRODUCT DATASHEET

N35500 Series - Bidirectional Regenerative Programmable DC Power Supply

One instrument that sources and sinks current in all four quadrants and returns absorbed energy to the grid at up to 93% efficiency - with built-in battery and PV-array simulation, lab-grade accuracy and full automation. 0-2250 V, up to 42 kW in 3U, scalable to megawatt systems.

2250 V max output	42 kW in 3U chassis	93% energy recovered	MW parallel-scalable	0.02% F.S. accuracy
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Model Selection Matrix

Model number = N355<kW>-<V>-<A>. Larger powers are realised by master/master parallel; systems scale to MW.

360 V class				
N35514-360-80	360 V	14 kW	+/-80 A	3U
N35522-360-160	360 V	22 kW	+/-160 A	3U
N35532-360-240	360 V	32 kW	+/-240 A	3U
N35542-360-240	360 V	42 kW	+/-240 A	3U
N35584-360-480	360 V	84 kW	+/-480 A	6U
N355126-360-720	360 V	126 kW	+/-720 A	22U
N355168-360-960	360 V	168 kW	+/-960 A	22U
N355210-360-1200	360 V	210 kW	+/-1200 A	32U
N355252-360-1440	360 V	252 kW	+/-1440 A	32U
N355294-360-1680	360 V	294 kW	+/-1680 A	32U
N355336-360-1920	360 V	336 kW	+/-1920 A	42U
N355378-360-2160	360 V	378 kW	+/-2160 A	42U
N355420-360-2400	360 V	420 kW	+/-2400 A	42U
500 V class				
N35514-500-65	500 V	14 kW	+/-65 A	3U
N35522-500-130	500 V	22 kW	+/-130 A	3U
N35532-500-180	500 V	32 kW	+/-180 A	3U
N35542-500-195	500 V	42 kW	+/-195 A	3U
N35584-500-390	500 V	84 kW	+/-390 A	6U
N355126-500-585	500 V	126 kW	+/-585 A	22U
N355168-500-780	500 V	168 kW	+/-780 A	22U
N355210-500-975	500 V	210 kW	+/-975 A	32U
N355252-500-1170	500 V	252 kW	+/-1170 A	32U
N355294-500-1365	500 V	294 kW	+/-1365 A	32U

N355336-500-1560	500 V	336 kW	+/-1560 A	42U
N355378-500-1755	500 V	378 kW	+/-1755 A	42U
N355420-500-1950	500 V	420 kW	+/-1950 A	42U
750 V class				
N35514-750-65	750 V	14 kW	+/-65 A	3U
N35522-750-130	750 V	22 kW	+/-130 A	3U
N35532-750-180	750 V	32 kW	+/-180 A	3U
N35542-750-195	750 V	42 kW	+/-195 A	3U
N35584-750-390	750 V	84 kW	+/-390 A	6U
N355126-750-585	750 V	126 kW	+/-585 A	22U
N355168-750-780	750 V	168 kW	+/-780 A	22U
N355210-750-975	750 V	210 kW	+/-975 A	32U
N355252-750-1170	750 V	252 kW	+/-1170 A	32U
N355294-750-1365	750 V	294 kW	+/-1365 A	32U
N355336-750-1560	750 V	336 kW	+/-1560 A	42U
N355378-750-1755	750 V	378 kW	+/-1755 A	42U
N355420-750-1950	750 V	420 kW	+/-1950 A	42U
1000 V class				
N35528-1000-65	1000 V	28 kW	+/-65 A	3U
N35532-1000-80	1000 V	32 kW	+/-80 A	3U
N35542-1000-80	1000 V	42 kW	+/-80 A	3U
N35556-1000-130	1000 V	56 kW	+/-130 A	6U
N35584-1000-195	1000 V	84 kW	+/-195 A	22U
N355112-1000-260	1000 V	112 kW	+/-260 A	22U
N355140-1000-325	1000 V	140 kW	+/-325 A	32U
N355168-1000-390	1000 V	168 kW	+/-390 A	32U
N355196-1000-455	1000 V	196 kW	+/-455 A	32U
N355224-1000-520	1000 V	224 kW	+/-520 A	42U
N355252-1000-585	1000 V	252 kW	+/-585 A	42U
N355280-1000-650	1000 V	280 kW	+/-650 A	42U
1500 V class				
N35522-1500-60	1500 V	22 kW	+/-60 A	3U
N35532-1500-60	1500 V	32 kW	+/-60 A	3U
N35542-1500-65	1500 V	42 kW	+/-65 A	3U
N35584-1500-130	1500 V	84 kW	+/-130 A	6U
N355126-1500-195	1500 V	126 kW	+/-195 A	22U
N355168-1500-260	1500 V	168 kW	+/-260 A	22U
N355210-1500-325	1500 V	210 kW	+/-325 A	32U
N355252-1500-390	1500 V	252 kW	+/-390 A	32U
N355294-1500-455	1500 V	294 kW	+/-455 A	32U

N355336-1500-520	1500 V	336 kW	+/-520 A	42U
N355378-1500-585	1500 V	378 kW	+/-585 A	42U
N355420-1500-650	1500 V	420 kW	+/-650 A	42U
2250 V class				
N35522-2250-60	2250 V	22 kW	+/-60 A	3U
N35532-2250-60	2250 V	32 kW	+/-60 A	3U
N35542-2250-65	2250 V	42 kW	+/-65 A	3U
N35584-2250-130	2250 V	84 kW	+/-130 A	6U
N355126-2250-195	2250 V	126 kW	+/-195 A	22U
N355168-2250-260	2250 V	168 kW	+/-260 A	22U
N355210-2250-325	2250 V	210 kW	+/-325 A	32U
N355252-2250-390	2250 V	252 kW	+/-390 A	32U
N355294-2250-455	2250 V	294 kW	+/-455 A	32U
N355336-2250-520	2250 V	336 kW	+/-520 A	42U
N355378-2250-585	2250 V	378 kW	+/-585 A	42U
N355420-2250-650	2250 V	420 kW	+/-650 A	42U

Technical Specifications (representative)

Output voltage range	0 - rated (360 / 500 / 750 / 1000 / 1500 / 2250 V)
Output current	Bidirectional +/- rated (to 240 A per unit, to 2400 A in cabinet)
Output power	Bidirectional +/- rated (14 kW - 420 kW per system; MW via parallel)
Operating quadrants	Dual-quadrant (source + regenerative sink), seamless crossover
Regenerative efficiency	Up to 93% (energy returned to the grid)
CV setting accuracy	<= 0.02% + 0.02% F.S.
CC / CP setting accuracy	<= 0.1% + 0.1% F.S.
Voltage readback accuracy	<= 0.02% + 0.02% F.S.
Dynamic response	Voltage rise/fall <= 5 ms (representative 3U); transient recovery < 4.5 ms (10->60%)
Load modes	CC / CV / CP / CR, with CC&CV priority
Simulation	Battery (NS81000, 7 libraries + custom) / PV I-V/P-V (NS91000, EN 50530 / Sandia)
Protections	OVP / OCP / OPP / UVP / UCP
Power factor	0.99
AC input	Three-phase 340-480 VAC, 47-63 Hz
Interface	LAN / RS232 / RS485 / CAN - SCPI, Modbus-RTU, CANopen
Display	6.8 inch LCD
Operating environment	0-50 C (derate > 35 C); storage -10-70 C; < 2000 m; 5-90% RH non-condensing
Standards / quality	CE / IEC 61010-1 / ISO 17025-traceable calibration (on request)

To request a configured quote for your voltage, power, application and timeline, email contact@ultrapowersys.com or visit ultrapowersys.com.