

Liebert has re-invented the double-conversion UPS. The Npower is the result of an international design collaboration and more than a decade of advanced research.



Every aspect of the Npower shows careful design and attention to detail. The rugged powertrain and advanced ActiveStar™ controls were subjected to computer simulations and thermal analysis to ensure reliable performance in every environment.

Even the physical packaging is uniquely efficient, to make fully configured systems more compact than other products on the market.

Best of all, it's a Liebert product—designed to give the same million-hour critical bus MTBF as its older brothers.

- Unmatched heritage of reliability and availability
- Smallest system footprint
- Excellent efficiency with non-linear loads and partial loads
- Outstanding dynamic response
- All-digital ActiveStar™ controls and graphical user interface

LIEBERT NPOWER™ 3-PHASE UPS: 30-130kVA, 60 Hz, 600VAC

General Specifications

INPUT	
Voltage	600VAC, 60 Hz 3-phase, 3- or 4-wire plus ground
Voltage Range	+10, -15% (no battery discharge at -20%)
Frequency Range	60 Hz, ±5
Current Distortion	10% maximum reflected THD at full load with optional input filter; 30% THD without filter
Current Limit	115% of full load input current
Current Walk-in	20 seconds to full load
Power Factor	0.80 lagging minimum at full load; up to 0.96 lagging at full load with optional input filter
Surge Protection	Sustains input surges without damage, per criteria listed in ANSI C62.41-1980 (IEEE 587)
ENVIRONMENTAL	
Operating Temperature	UPS: 32° to 104°F (0-40°C) Battery: 68° to 86°F (20-30°C)
Non-Operating Temp.	-4° to 158°F (-20° to 70°C)
Relative Humidity	0-95% non-condensing
Operating Altitude	Up to 6,600 ft. (2000m) without derating
Acoustical Noise	Less than 65 dBA typical, measured 3.3 ft. (1m) from the unit
OUTPUT	
Voltage	208 or 600VAC 3-phase, 4-wire plus ground
Voltage Adjustment Range	±5%
Voltage Regulation	±0.5% for balanced load ±1.0% for 100% unbalanced load
Dynamic Regulation	±5% deviation for 100% load step ±1% for loss or return of AC input
Transient Response Time	Recover to ±1% of steady state within 1 cycle
Voltage Distortion	For linear loads, 1% THD; less than 2.5% THD for 100% nonlinear loads w/o kVA/kW derating
Phasing Balance	120° ±0.5° for balanced load. 120° ±1° for 100% unbalanced load
Frequency Regulation	±0.1%
Load Power Factor Range	1.0 to 0.7 lagging without derating
Overload	125% of full load for 10 minutes 150% for 1 minute w/ true sinusoidal waveform
STANDARDS	
ETL Listed to UL 1778 and UL 924 UPS standards, and CSA certified. Meets current requirements for safe high performance UPS operation.	

Npower Matching Battery Cabinet

Model	Run Time (minutes) for kVA:							Dimensions WxDxH, in. (mm)	Weight lb. (kg)
	30	40	50	65	80	100	130		
1FJ	12	7	-	-	-	-	-	25x32.5x71 (635x825x1800)	1,600 (725)
1HJ	21	14	10	7	5	-	-		1,800 (815)
1LJ	28	20	14	8	5	-	-		2,350 (1,065)
1MJ	36	25	18	12	8	5	-		2,350 (1,065)
1PJ	53	38	28	20	15	10	-		3,000 (1,360)
1PJ(130)	-	-	-	-	-	-	7	49x32.5x71 (1250x825x1800)	3,350 (1,520)
1RJ	62	45	34	25	19	13	9		3,700 (1,680)
1UJ	72	52	39	30	23	17	12		4,000 (1,815)
1WJ	104	74	55	40	33	25	16		5,050 (2,290)
2PJ	126	83	67	50	38	28	-		(2) 25x32.5x71 635x825x1800
2PJ(130)	-	-	-	-	-	-	20	(2) 49x32.5x71 (1250x825x1800)	6,700 (3,040)
2RJ	144	104	76	55	45	35	25		7,400 (3,360)
2UJ	156	111	90	67	52	40	30		8,000 (3,630)
2WJ	-	-	-	97	74	55	40		10,100 (4,580)
3PJ	204	145	108	78	63	48	-	(3) 25x32.5x71 635x825x1800	9,000 (4,080)
3PJ(130)	-	-	-	-	-	-	35	(3) 49x32.5x71 (1250x825x1800)	10,050 (4,560)
3RJ	223	161	129	94	72	54	39		11,100 (5,040)
3UJ	265	187	142	105	81	65	48		12,000 (5,445)
3WJ	421	302	217	157	124	94	69		15,150 (6,870)
4PJ	301	206	154	111	90	68	-	(4) 25x32.5x71 635x825x1800	12,000 (5,440)
4PJ(130)	-	-	-	-	-	-	50	(4) 49x32.5x71 1250x825x1800	13,400 (6,080)
4RJ	329	224	182	134	102	77	55		14,800 (6,720)
4UJ	377	266	201	147	111	91	67		16,000 (7,260)
4WJ	480	423	320	222	180	135	97		20,200 (9,160)

Maintenance Bypass Cabinets

Model	Dimensions	Weight, lb. (kg) for kVA:		
	WxDxH, in. (mm)	30-50	65-80	100-130
L or N	25x32.5x71 (635x825x1800)	660 (299)	750 (340)	800 (363)
P or Q	31.7x32.5x71 (805x825x1800)	1,210 (549)	1,320 (599)	1,540 (699)

Slim-Line Distribution Cabinet

kVA	Dimensions	Weight
	WxDxH, in. (mm)	lb. (kg)
All	10x32.5x71 (254x825x1800)	250 (113)

Site Planning Data, Liebert Npower: 30-130kVA, 60 Hz, 600VAC

UPS Rating		Voltage		Standard AC Input			AC Input w/Filter Opt.			Battery			AC Output		Mechanical Data				
				Current (A)		Rec.	Current (A)		Rec.	Nom.	Battery	Max.	Current		Dimensions WxDxH, in. (mm)	Weight lb. (kg)	Floor Loading lb./ft. ² (kg/m ²)	Heat Dis. BTU/h (kWH)	Cooling Air CFM (m ³ /h)
kVA	kW	Input	Output	Nom.	Max.	OCPD	Nom.	Max.	OCPD	Nom.	VDC	kW	Discharge	Nom.					
30	24	600	208	32	40	50	28	34	50	480	26	66A	83	125	31.7x32.5x71 (805x825x1800)	2,050 (930)	287 (1401)	8,500 (2.5)	720 (1223)
30	24	600	600	32	40	50	28	34	50	480	26	66A	29	50		2,150 (975)	301 (1470)	11,000 (3.2)	720 (1223)
40	32	600	208	42	53	70	37	46	60	480	34	88A	111	150			2,400 (1089)	301 (1470)	14,000 (4.1)
40	32	600	600	42	53	70	37	46	60	480	34	88A	38	50		39.4x32.5x71 (1001x825x1800)		270 (1318)	18,000 (5.3)
50	40	600	208	53	66	80	46	57	70	480	43	109A	139	175			270 (1318)	22,000 (6.4)	960 (1631)
50	40	600	600	53	66	80	46	57	70	480	43	109A	48	60				3,150 (1429)	284 (1387)
65	52	600	208	67	84	100	59	74	100	480	55	141A	180	225	284 (1387)	33,000 (9.7)	1440 (2447)		
65	52	600	600	67	84	100	59	74	100	480	55	141A	63	80		13	—		—
80	64	600	208	83	103	125	73	91	125	480	68	174A	222	300	49.2x32.5x71 (1250x825x1800)		284 (1387)	26,000 (7.6)	1440 (2447)
80	64	600	600	83	103	125	73	91	125	480	68	174A	77	100			13, 14	—	—
100	80	600	208	103	128	175	90	113	150	480	85	218A	278	350	13	—		—	—
100	80	600	600	103	128	175	90	113	150	480	85	218A	96	125		13, 14	—	—	—
130	104	600	208	133	167	200	118	147	200	480	111	283A	361	450	13, 14		—	—	—
130	104	600	600	133	167	200	118	147	200	480	111	283A	125	175		13, 14	—	—	—
See Notes for Table (below):				1	2,3,8,12	6	1	2,3,8,12	6	4	—	1,3,5,8,12	1,3,8,12	6	13		13, 14	—	—

Notes for Table

- Nominal (Nom) current is based on full rated output load.
- Maximum (Max) current (125% of nominal) is short duration for battery recharge conditions.
- UPS input and bypass cables must be run in separate conduit from output cables.
- Nominal battery voltage is shown at 2.0 volts/cell per NEC 480-2.
- Power cables from UPS DC link to batteries should be sized for a total maximum 2.0V line drop (measured at the UPS) at maximum discharge current.
- OCPD=Overcurrent Protection Device. Recommended AC input and AC output overcurrent protection represents 125% of nominal full load current (continuous) per NEC 215.
- Minimum-sized grounding conductors to be per NEC 250-122. Parity-sized ground conductors are recommended. Neutral conductors to be sized for full capacity per NEC 310-15(b)(4). References are per NEC 1999.
- Wiring requirements:
AC Input and Output: 3-phase, 3- or-4-wire plus ground, depending on UPS configuration. See Installation Manual and submittal drawings for specific instructions.
DC Input: 2-wire (positive and negative), plus ground.
- All wiring is to be in accordance with national and local electrical codes.

- Minimum access clearance is 3 ft. (0.9m) front and 1 ft. (0.3m) above UPS.
- Top or bottom cable entry through removable access plates. Punch plate to suit conduit size, then replace.
- Control wiring and power wiring must be run in separate conduit.
- Weights and dimensions shown do not include battery cabinet, Slim-Line distribution cabinet or other options.
- Add 560 lb. (254kg) for 100-130kVA unit with dual input and isolated 208VAC output.
- Backup emergency generator must be properly sized and equipped with an isochronous governor (generator frequency regulation) and a UPS-compatible voltage regulator.
- An on-site automatic transfer switch should be equipped with auxiliary contacts for UPS "on generator" current limit. Refer to Liebert publication 91K-PLT-48-02.
- An external isolated maintenance bypass circuit might cause utility AC input to be out of phase with the UPS AC output.

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