

Power Systems & Controls

Series NB -- No Break Rotary UPS



The Series NB combines proven power protection systems in one complete package. Standard systems are available from 25 to 2500 kVA at voltages from 208 to 13,800 Vac.

The heart of the Series NB is the extended power module. The motor-generator, utilizing state-of-the-art mechanical energy storage, accepts raw electrical power from the normal power company and conditions it to computer grade electrical power. Should normal power fail, the Series NB will start the

back-up engine generator and seamlessly provide continuous electrical power to the critical load.

The Series NB also corrects input power to meet IEEE 519 thus protecting the company from complaints of high current harmonic distortion.

The Series NB helps to guarantee the lowest possible power bill and the highest electrical power quality.

The Series NB has been designed to protect demanding electrical systems like Variable Speed Motor Drives that other power conditioning technologies can not handle.

The Series NB can be custom fit to any application to provide a seamless functioning system.

Standard Equipment Features

- 100% electrical isolation from all utility to load
- 24 x 7 power conditioning
- Back-up generator ready
- "Batteryless" UPS
- Touch screen interface
- Tight voltage regulation, no load to full load during transition
- Motor starting capability
- Adjustable Ride-through times without starting diesel & eliminates "nuisance starts"
- Engine generator operation to 8 hours or more (with diesel options)
- 20 years plus service life
- Single point contact for all service and maintenance
- Lowest "part count" in the industry

Optional Features

- Split input/output voltage
- Backup diesel generator with transfer switch
- Remote touch screen (control)
- Parallel modules and "Ring Bus" configurations to 10,000 kVA
- Remote monitor (Status & Alarm)
- Remote communications
- Emergency back-up engine

System Specifications

*Note: System performance shown is typical and is dependent upon M-G sizing, options desired, and loading of the system.

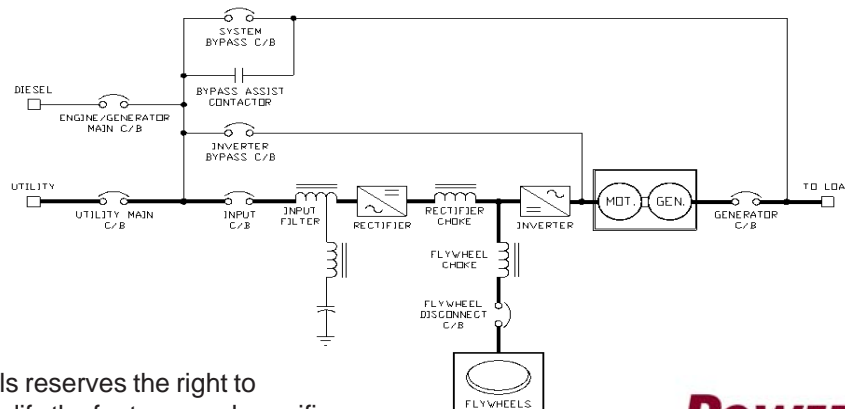
INPUT		OUTPUT	
Nominal Voltage Available		Nominal Voltage Available	
➤ @ 60 Hz	208, 240, 480, 600	➤ @ 60 Hz	208, 240, 480, 600
➤ @ 50 Hz	380, 415	➤ @ 50 Hz	380, 415
➤ Phase	3 Phase 4 Wire + Ground	➤ Phase	3 Phase 4 Wire + Ground
➤ Frequency Tolerance	57Hz to 63Hz or 47 to 53	➤ Frequency Regulation	± 0.5%
➤ Magnitude Tolerance		➤ Adjustment	± 10%
➤ Continuous	+10%, -15%	➤ Regulation	
➤ Transient	1500v for 10 ms	➤ Transients	50% Block Load +/- 8%
Power Factor		➤ Recovery Time	0.5 within 0.5 seconds
➤ Starting Inrush	Less than 100%	➤ Steady State	+/-0.5% Δ 90° F

SERIES NB CONSOLE, DIMENSIONS & WEIGHTS					
60HZ	KVA/KW	L (CM)	W (CM)	H (CM)	W (KGS)
UNDER 25		CONSULT FACTORY			
30 / 24		36 (91.5)	34.5 (87.6)	76 (193)	1950 (884)
50 / 40		51 (130)	34.5 (87.6)	76 (193)	3000 (1361)
75 / 60		51 (130)	34.5 (87.6)	76 (193)	3950 (1791)
100 / 80		114 (289.6)	34.5 (87.6)	76 (193)	4800 (2177)
125 / 100		114 (289.6)	34.5 (87.6)	76 (193)	5200 (2359)
150 / 120		114 (289.6)	34.5 (87.6)	76 (193)	5500 (2495)
200 / 160		114 (289.6)	34.5 (87.6)	76 (193)	6100 (2767)
250 / 200		114 (289.6)	34.5 (87.6)	76 (193)	6410 (2907)
300 / 240		120 (304.8)	34.5 (87.6)	79.5(202)	7073 (3215)
313 / 250		96 (244)	120 (304)	76 (193)	3500 (1590)
375 / 300		96 (244)	132 (335)	76 (193)	4800 (2182)
438 / 350		96 (244)	132 (335)	76 (193)	4800 (2182)
500 / 400		96 (244)	132 (335)	76 (193)	4800 (2182)
625 / 500		96 (244)	132 (335)	76 (193)	4800 (2182)
750 / 600		96 (244)	132 (335)	76 (193)	4800 (2182)
875 / 700		108 (274)	192 (488)	76 (193)	7130 (3241)
1000 / 800		108 (274)	192 (488)	76 (193)	7130 (3241)
1250 / 1000		108 (274)	192 (488)	76 (193)	7130 (3241)
1400 / 1120		108 (274)	192 (488)	76 (193)	7130 (3241)
1500 / 1200		108 (274)	192 (488)	76 (193)	7130 (3241)

NOTE: Flywheel Dimension is ride-thru duration dependant
Units Greater than 300 kva can utilize Horizontal or Vertical MG sets
which dimensions are not included above

THD (Total Harmonic Distortion)	
➤ Single	2% Max
➤ Total	3% Max
Phase Separation	
➤ Balanced Load	120° +/- 1°
➤ 25% Unbalance	120° +/- 3°
Overload Capacity	
➤ 100% Rating	Continuous
➤ 110%	2 Hours
➤ 125%	10 Minutes
➤ 150%	1 Minutes
➤ Power Factor	0.8

ENVIRONMENT	
➤ Temperature	32° F to 104° F (0° C to 40° C)
➤ Altitude	0 to 1500 meters (0 to 3300 FT)
➤ Humidity	0 to 95% non-condensing
➤ Noise Level	@ 1.5 meters (5 FT)
➤ Open	90 dBa
➤ Enclosed	75 dBa
➤ Silenced	65 dBa



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POWER SYSTEMS
& CONTROLS
THE POWER IS ON!