

NETCON EPOWER SERIES UPS

10~800KVA, 3:3 phase PF: 0.9

- Energy back-feed protection type -



Wide input Range Power Factor Overload protection Long Back-up IFR ECO Interface (optional) Battery cold start function

Netcon Transformer based design UPS are Low frequency UPS systems, which provides better compatibility with various types of loads and ensures higher levels of reliability and efficiency. They are often used in applications where reliability and performance are critical, such as data centres, medical facilities, and industrial environments. Netcon Low frequency UPS has salient features like Higher Power Capacity compared to High frequency UPS, better compatibility with wide range of loads, greater surge capacity to handle sudden spike in power demand, Improved Voltage Regulation to regulate voltage more effectively, providing a stable and clean power supply to connected equipment, enhanced reliability less prone to failure and can withstand harsh operating conditions. Overall, low frequency UPS systems are preferred in applications where reliability, capacity, and compatibility with various loads are paramount.

Features:

► Online double conversion

Online Double Conversion design helps to output a pure sine wave, which is immune from the UPS input, so that the load can run steadily.

UPS transfers among different working mode without output interruption, thereby powering the load uninterruptedly.

► Full DSP control

Double DSP control makes the whole system more stable and reliable.

► High power factor

The output power factor up to 0.9 better matches the load
The input power factor 0.97 with filter helps to improve the efficiency, reduce the harmonic pollution to the Grid and lower the UPS running cost.

► Optimized battery management

Intelligent battery management system and advanced battery auto float/boost charge technology, reduces the frequency of battery maintenance, greatly improves the battery efficiency and extends battery life.

Battery discharge time prediction: The system will display the backup time of battery calculated by discharge current and voltage.

Battery self-test: Battery is automatically tested at regular intervals.

Flexible battery voltage configuration.

► N+X parallel redundancy

N+X parallel redundant design, up to 6 units available, makes the configuration more flexible.

Any unit in parallel system fails, the faulty one will automatically cut off the output, and the load will be powered by the remained units.

It is easy to configure the parallel system just by connecting the parallel cables and doing proper settings

Non-fixed Master-Slave relationship: Among several UPS in parallel, the unit startup first is Master UPS, the others are Slave. The master and slave may be exchanged.



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▶ **Battery discharge time prediction:** The system will display the backup time of battery calculated by discharge current and voltage.

Battery self-test: Battery is automatically tested at regular intervals.

Flexible battery voltage configuration.

▶ Wide input adaptability

The range of AC input voltage is (380/400/415Vac) (-25%/+20%), minimizing transfer to battery mode, thereby greatly prolonging the battery life.

Wide input frequency ranging from 45Hz to 65Hz, ensures stability of UPS while generator connected Power walk in.

Specially designed power walk in function, in which rectifier of each unit in parallel system will be turned on in sequence at intervals to avoid the sudden load on the generator, thereby reducing the cost of the generator required.

▶ Generator mode

Set the maximum output power of the generator when a smaller one than needed is employed to extend the battery duration time. In this case, the load is supplied by both the generator and battery.

▶ LOAD ENERGY BACK-FEED PROTECTION

crowbar circuit, which can absorb the backfeed energy from motor or other loads, ensures the stability of ups bus and battery life.

▶ LBS synchronization

Synchronize the output of the two independent UPS systems (Single unit or parallel) even when the two systems are operating on different modes (Bypass/Inverter) or on battery.

▶ Multi-protection

Self-diagnosis function will take place before start-up for safety.

Multi-protection: AC input under/over voltage, overload, short-circuit, over-current, over bus voltage, overtemperature, fan failure, auxiliary power failure, battery under voltage, battery over-charge and so on.

▶ EPO function

A concave red EPO button with transparent cover is embodied in the LCD control panel for emergency power off.

▶ User-friendly network management

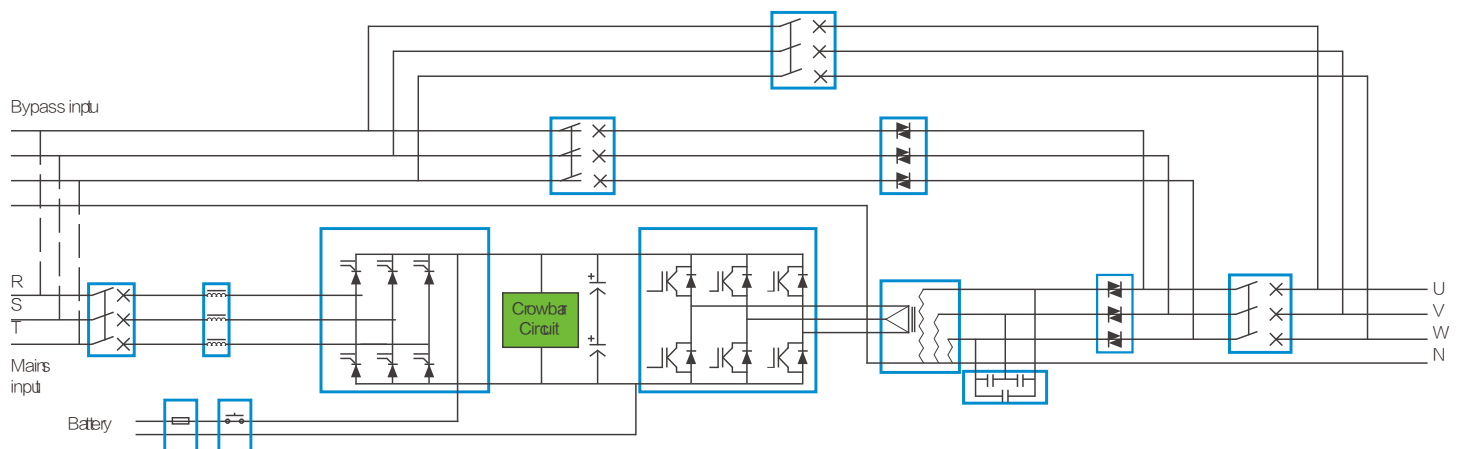
Chinese/English LCD and LED mimic diagram: Real time operation parameters and status (7 inch touch screen optional)

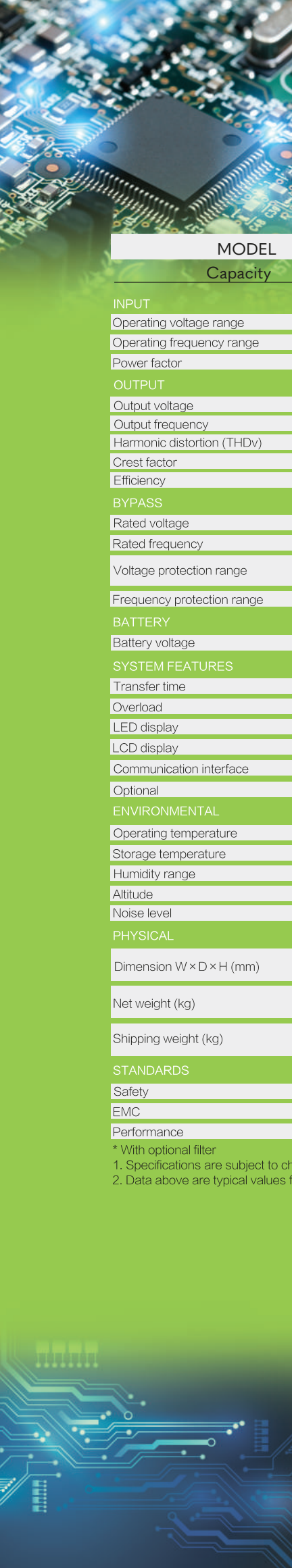
RS232 & RS485 communication ports:

For local monitor with corresponding software, both can support MODBUS rotocol SNMP adapter (Optional): For remote monitor through network

Dry contacts (10-160kVA optional) for additional monitoring:

- a) UPS on Inverter
 - b) Mains input failure
 - c) Remote EPO
 - d) Battery low voltage alarm
 - e) UPS fault
 - f) UPS alarm
 - g) UPS on battery
 - h) UPS on bypass
- Note : d)--h) optional





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Technical Specifications

MODEL	NTEP10L	NTEP20L	NTEP30L	NTEP40L	NTEP60L	NTEP80L	NTEP100L	NTEP120L	NTEP160L
Capacity	10kVA/9kW	20kVA/18kW	30kVA/27kW	40kVA/36kW	60kVA/54kW	80kVA/72kW	100kVA/90kW	120kVA/108kW	160kVA/144kW
INPUT									
Operating voltage range	380/400/415Vac (- 25%/ + 20%), (3Ph + PE)								
Operating frequency range	50/60Hz (± 5%)								
Power factor	≥0.97 *								
OUTPUT									
Output voltage	380/400/415Vac (± 1%), (3Ph+N+PE)								
Output frequency	50/60Hz (± 0.05%)								
Harmonic distortion (THDv)	≤2% (Linear load)						≤1% (Linear load)		
Crest factor	3:1 (Max)								
Efficiency	88%	89%		90%		90.5%	92%		92.5%
BYPASS									
Rated voltage	380/400/415Vac, (3Ph + N + PE)								
Rated frequency	50/60Hz								
Voltage protection range	Upper limit: + 20% (+ 10%, + 15%, + 20% adjustable) Lower limit: - 40% (- 10%, - 20%, - 30%, - 40% adjustable)								
Frequency protection range	± 10% (± 2.5%, ± 5%, ± 10%, ± 20% adjustable)								
BATTERY									
Battery voltage	384Vdc (360~384Vdc)								
SYSTEM FEATURES									
Transfer time	0 ms (Line mode→ Battery mode)								
Overload	Load≤ 110%/60min; ≤ 125%/10mins; ≤ 150%/1 min, to Bypass								
LED display	Input, Inverter, Bypass, Battery, Output, Status								
LCD display	I/O voltage, frequency, power, power factor, battery voltage, current, battery status, load percentage, UPS status, history record								
Communication interface	RS232, RS485, EPO, Dry contact (Optional), SNMP card (Optional)								
Optional	Harmonic filter, SNMP adapter, LBS cables, battery temperature sensor, Bypass current-sharing inductor								
ENVIRONMENTAL									
Operating temperature	0 ~ 40℃								
Storage temperature	-25 ~ 55℃								
Humidity range	0 ~ 95% (Non-condensing)								
Altitude	<1500m								
Noise level	<58dB				<68dB				
PHYSICAL									
Dimension W × D × H (mm)	350 × 650 × 1050			430 × 830 × 1100		720 × 690 × 1400	720 × 690 × 1400 (6P) 1515 × 830 × 1600 (12P)	890 × 790 × 1600 (6P) 1515 × 830 × 1600 (12P)	890 × 790 × 1600 (6P) 1400 × 1000 × 1900 (12P)
Net weight (kg)	145	165	204	255	320	450	556 (6P)/ 1300 (12P)	693 (6P)/ 1450 (12P)	780 (6P)/ 1645 (12P)
Shipping weight (kg)	160	180	225	280	345	485	591 (6P)/ 1370 (12P)	738 (6P)/ 1520 (12P)	825 (6P)/ 1775 (12P)
STANDARDS									
Safety	IEC/EN 62040-1; IEC 62477-1								
EMC	IEC/EN 62040-2 (IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11, IEC 61000-2-2)								
Performance	IEC/EN 62040-3								

* With optional filter
1. Specifications are subject to change without prior notice
2. Data above are typical values for reference only, not as a basis for engineering design

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3:3 Phase PF 0.9, 10~800 KVA



Technical Specifications

MODEL	NTEP200L	NTEP300L	NTEP400L	NTEP500L	NTEP600L	NTEP800L
Capacity	200kVA/180kW	300kVA/270kW	400kVA/360kW	500kVA/450kW	600kVA/540kW	800kVA/720kW
INPUT						
Operating voltage range	380/400/415Vac (–25%/+20%), (3Ph+PE)					
Operating frequency range	50/60Hz (± 5%)					
Power factor	≥0.97 *					
OUTPUT						
Output voltage	380 / 400 / 415Vac (± 1%), (3Ph+N+PE)					
Output frequency	50 / 60Hz (± 0.05%)					
Harmonic distortion (THDv)	≤1% (Linear load)					
Crest factor	3:1 (Max)					
Efficiency	92.5%	93%		93.5%		94%
BYPASS						
Rated voltage	380/400/415Vac, (3Ph+N+PE)					
Rated frequency	50/60Hz					
Voltage protection range	Upper limit: +20% (+10%, +15%, +20% adjustable) Lower limit: –40% (–10%, –20%, –30%, –40% adjustable)					
Frequency protection range	± 10% (± 2.5%, ± 5%, ± 10%, ± 20% adjustable)					
BATTERY						
Battery voltage	384Vdc (360 ~ 408Vdc)			480Vdc		600Vdc
SYSTEM FEATURES						
Transfer time	0 ms (Line mode → Battery mode)					
Overload	Load≤110%/60min; ≤125%/10mins; ≤150%/1 min, to Bypass					
LED display	Input, Inverter, Bypass, Battery, Output, Status					
LCD display	I/O voltage, frequency, power, power factor, battery voltage, current, battery status, load percentage, UPS status, history record, settings					
Communication interface	RS232, RS485, EPO, Dry contact, SNMP card (Optional)					
Optional	Harmonic filter, SNMP adapter, LBS cables, battery temperature sensor, Bypass current-sharing inductor					
ENVIRONMENTAL						
Operating temperature	0 ~ 40℃					
Storage temperature	–25 ~ 55℃					
Humidity range	0 ~ 95% (Non-condensing)					
Altitude	<1500m					
Noise level	<72dB			<75dB		
PHYSICAL						
Dimension W × D × H (mm)	1200 × 800 × 1600 (6P) 1400 × 1000 × 1900 (12P)	1400 × 1000 × 1900 (6P) 1640 × 1000 × 1900 (12P)		2580 × 1000 × 1900	2800 × 1040 × 1900	3280 × 1040 × 1900
Net weight (kg)	1030 (6P)/1715 (12P)	1560 (6P)/2395 (12P)	1640 (6P)/2510 (12P)	3510	3950	4950
Shipping weight (kg)	1130 (6P)/1845 (12P)	1690 (6P)/2545 (12P)	1770 (6P)/2665 (12P)	3730	4250	5245
STANDARDS						
Safety	IEC/EN 62040–1; IEC 62477–1					
EMC	IEC/EN 62040–2 (IEC 61000–4–2, IEC 61000–4–3, IEC 61000–4–4, IEC 61000–4–5, IEC 61000–4–6, IEC 61000–4–8, IEC 61000–4–11, IEC 61000–2–2)					
Performance	IEC/EN 62040–3					

* With optional filter

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ORDERING INFORMATION

Model No.	Description
NTEP10L	Netcon 10kVA/9KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP20L	Netcon 20kVA/18KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP30L	Netcon 30kVA/27KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP40L	Netcon 40kVA/36KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP60L	Netcon 60kVA/54KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP80L	Netcon 80kVA/72KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP100L	Netcon 100kVA/90KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP120L	Netcon 120kVA/108KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP160L	Netcon 160kVA/108KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP200L	Netcon 200kVA/180KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP300L	Netcon 300kVA/270KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP400L	Netcon 400kVA/360KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP500L	Netcon 500kVA/450KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP600L	Netcon 600kVA/540KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS
NTEP800L	Netcon 800kVA/720KW 3:3 phase PF: 0.9, 50/60Hz, N+X parallel redundancy, with robust Output Isolation transformer UPS



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