

# ULTRA-POWER SERIES

## 20-300kVA Double Conversion Modular UPS



The UPS system is designed with modular architecture, where each module operates independently and contains its own components, including power converters, inverters, and battery systems. This flexible, scalable design allows for seamless expansion and customized power protection, ensuring continuous operation based on specific need.



### General Features

- High reliability
- High Scalability and Redundancy
- Hot-swappable power modules and bypass modules.
- 3-level topology design, efficiency is up to 95.8%.
- High input power factor, it is up to 0.99
- THDi<3% (100% linear load).
- N+X parallel redundancy supports a maximum of 6 units in parallel.
- Batteries number of each group can be selected from 30 pieces to 50 pieces
- Output power factor is 1.0, UPS can supply power to 100% unbalanced load.
- High adaptability for load, it can connect full inductive load or capacitive load.
- With 7 inches (standard) and 10 inches (optional) colorful touch LCD screen
- Support SNMP, RS232, RS485, Dry contact interface.

### SPECIFICATIONS

| PARAMETERS |                                 |                                                                                                                                                                             |                                                                                                          |
|------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Cabinet    | Cabinet capacity kVA            | 60kVA                                                                                                                                                                       | 100kVA                                                                                                   |
|            | Module capacity kW              | 20kW                                                                                                                                                                        | 30kW                                                                                                     |
|            | Max. module number              | 3                                                                                                                                                                           | 5                                                                                                        |
| Input      | Nominal voltage                 | 380/400/415Vac, (3Ph+N+PE)                                                                                                                                                  |                                                                                                          |
|            | Operating voltage range         | 138~305Vac for 40% load; 305~485Vac for 100% load                                                                                                                           |                                                                                                          |
|            | Operating frequency range       | 40Hz~70Hz                                                                                                                                                                   |                                                                                                          |
|            | Power factor                    | >0.99                                                                                                                                                                       |                                                                                                          |
|            | Harmonic distortion (THDi)      | ≤3% (100% linear load)                                                                                                                                                      |                                                                                                          |
|            | Bypass voltage range            | Max. voltage : 220V: +25% (optional+10%, +15%, +20% ); 230V : +20% (optional +10%, +15% ); 240V : +15% (optional +10%) Min. voltage : -45% (optional-10%, -15%, -20%, -30%) |                                                                                                          |
|            | Bypass frequency tracking range | ±10%                                                                                                                                                                        |                                                                                                          |
|            | Power walk in                   | Support                                                                                                                                                                     |                                                                                                          |
|            | Generator input                 | Support                                                                                                                                                                     |                                                                                                          |
|            | Rated voltage                   | 380/400/415Vac, (3Ph+N+PE)                                                                                                                                                  |                                                                                                          |
| Output     | Power Factor                    | 1                                                                                                                                                                           |                                                                                                          |
|            | Voltage regulation              | ±1%                                                                                                                                                                         |                                                                                                          |
|            | Output frequency                | Line mode                                                                                                                                                                   | Synchronize with input, when the input frequency >±10% (±1%/±2%/±4%/±5% optional), output 50/60 (±0.1Hz) |
|            |                                 | Batt. mode                                                                                                                                                                  | (50/60±0.1%)Hz                                                                                           |
|            | Crest factor                    | 3:1                                                                                                                                                                         |                                                                                                          |
|            | Harmonic distortion(THDv)       | ≤1% with linear load; ≤3% with nonlinear load                                                                                                                               |                                                                                                          |
|            | Efficiency                      | Up to 95.8%                                                                                                                                                                 |                                                                                                          |
| Battery    | Battery voltage                 | 360Vdc~600Vdc (30~50 pcs, 36 pcs default, 36~50 pcs no power derating; 32~34 pcs output power factor 0.9; 30 pcs output power factor 0.8)                                   |                                                                                                          |
|            | Power module charge current     | 18A(Max.)                                                                                                                                                                   |                                                                                                          |

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| PARAMETERS      |                            |               |                                                                                                                                     |              |              |              |              |
|-----------------|----------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|
| System Features | Transfer time              |               | Utility to Battery : 0ms; Utility to Bypass : 0ms                                                                                   |              |              |              |              |
|                 | Overload                   | Inverter mode | ≤110% 60min, ≤125% 10min, ≤150% 1min, >150% 1.2s shut down inverter                                                                 |              |              |              |              |
|                 |                            | Bypass mode   | 30°C : 135% for long term; 40°C: 125% for long term; >1000%, 100ms                                                                  |              |              |              |              |
|                 | Overheat                   |               | Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately                                                                 |              |              |              |              |
|                 | Low battery voltage        |               | Alarm and Switch off                                                                                                                |              |              |              |              |
|                 | Self-diagnostics           |               | Upon Power On and Software Control                                                                                                  |              |              |              |              |
|                 | Backfeed protection        |               | Support                                                                                                                             |              |              |              |              |
|                 | Battery                    |               | Advanced Battery Management                                                                                                         |              |              |              |              |
|                 | Noise suppression          |               | Complies with EN62040-3                                                                                                             |              |              |              |              |
|                 | Audible&visual alarm       |               | Line Failure, Battery Low, Overload, System Fault                                                                                   |              |              |              |              |
|                 | Status LED & LCD display   |               | Line Mode, Bypass Mode, Battery Low, Battery Fault, Overload & UPS Fault                                                            |              |              |              |              |
|                 | Reading on the LCD display |               | Input, Output, Battery, Command, Setting, Maintenance                                                                               |              |              |              |              |
|                 | Communication Interface    |               | Rs232, RS485, Parallel, LBS, BMS, Dry contact port, Relay card(optional), SNMP card(optional), Battery temperature sensor(optional) |              |              |              |              |
| Environment     | Operating temperature      |               | 0°C~40°C                                                                                                                            |              |              |              |              |
|                 | Storage temperature        |               | -25°C~55°C                                                                                                                          |              |              |              |              |
|                 | Humidity range             |               | 0~95% (non condensing)                                                                                                              |              |              |              |              |
|                 | Altitude                   |               | <1500m, derating required when >1500m                                                                                               |              |              |              |              |
|                 | Noise level                |               | <58dB                                                                                                                               |              |              |              |              |
|                 | IP Rating                  |               | IP 20                                                                                                                               |              |              |              |              |
| Physical        | Dimension WxDxH (mm)       | UPS Cabinet   | 600×850×1200                                                                                                                        | 600×850×1200 | 600×850×2000 | 600×850×1200 | 600×850×1200 |
|                 |                            | Power Module  | 440×620×86 (2U)                                                                                                                     |              |              |              |              |
|                 | Net Weight (kg)            | UPS Cabinet   | 130~140                                                                                                                             | 145~170      | 170~200      | 130~145      | 145~170      |
|                 |                            | Power Module  | 21                                                                                                                                  |              |              |              |              |
| Standards       | Safety                     |               | CE; IEC/EN62040-1, IEC/EN62477-1                                                                                                    |              |              |              |              |
|                 | EMC                        |               | IEC/EN62040-2 (IEC61000-2-2, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8, IEC61000-4-11)     |              |              |              |              |

\*Product specifications and appearances are subject to change without prior notice.

## ORDERING GUIDE

| Modular UPS Series | Cabinet Types                                                                                      |                                                                                                     | Cabinet Types                   |                                 |
|--------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------|
|                    | Section A (20 KW Power Module Supporting type cabinet)                                             | Section B (30 KW Power Module Supporting type cabinet)                                              | Section A for 20kW Power Module | Section B for 30kW Power Module |
| NMLU               | A: None<br>060: 060kVA(Max. 3 Module)<br>100: 100kVA(Max. 5 Module)<br>200: 200kVA(Max. 10 Module) | B: None<br>060: 060kVA(Max. 2 Module)<br>150: 150kVA (Max. 5 Module)<br>300: 300kVA(Max. 10 Module) | A: None                         | B: None                         |
|                    |                                                                                                    |                                                                                                     | 01: 01                          | 01: 01                          |
|                    |                                                                                                    |                                                                                                     | 02: 02                          | 02: 02                          |
|                    |                                                                                                    |                                                                                                     | 03: 03                          | 03: 03                          |
|                    |                                                                                                    |                                                                                                     | 04: 04                          | 04: 04                          |
|                    |                                                                                                    |                                                                                                     | 05: 05                          | 05: 05                          |
|                    |                                                                                                    |                                                                                                     | 06: 06                          | 06: 06                          |
|                    |                                                                                                    |                                                                                                     | 07: 07                          | 07: 07                          |
|                    |                                                                                                    |                                                                                                     | 08: 08                          | 08: 08                          |
|                    |                                                                                                    |                                                                                                     | 09: 09                          | 09: 09                          |
|                    |                                                                                                    |                                                                                                     | 10: 10                          | 10: 10                          |

Part no: & description (for example)

| Part Number  | Description                                               |
|--------------|-----------------------------------------------------------|
| NMLU-A060A02 | Modular UPS 60kVA Cabinet with 2pcs of 30kW power module  |
| NMLU-A300A04 | Modular UPS 300kVA Cabinet with 4pcs of 30kW power module |
| NMLU-A150A04 | Modular UPS 150kVA Cabinet with 4pcs of 30kW power module |