Ultra compact modular UPS

HIGHLIGHTS

- **Maximum availability**
- **High scalability**
- **Unmatched power density**
- **Efficiency > 96%**
- **Multiple controls**
- **High flexibility**
- **Advanced communication**

The Primax UPS represents the most modern modular solution to guarantee the continuity of your *Critical Loads* . It is designed to guarantee the electrical energy necessary for the operation of critical environments with high energy density.

The Primax modular UPS grows with your business needs, avoiding oversizing the UPS and optimizing both your initial investment and your operating costs. When your needs grow, the Primax solution can expand its power capacity while maintaining the highest levels of protection, availability, redundancy and investment cost reduction.

The Primax modular UPS ensures the availability of a scalable, safe and high-quality power source for numerous critical applications.

Factor Correction) input control Corrected), The Primax modular UPS guarantees the highest level of performance in terms of overall efficiency, input power factor and impact of harmonics on the power source

Highlights

Architecture modular : The parallelability allows to cover a large number of power sizes with few module sizes; in fact, these can work individually or in parallel up to 4 modules to expand the power range supplied

Furthermore, maintenance is made easier by the use of the dedicated Manual Bypass option.
the spare modules can be standardized at the time of ordering in order to stock a single model

Ultra Compact Power Modules : just 3 U (Rack units) with significant space savings housed in 19" racks for installation flexibility even on site with very limited FootPrint

Flexible Power : up to 4 modules in parallel, 10, 20, 30 or 40kW per module, with a maximum power of 160kW

High Power Density: Ultra high, further 30% reduction in size compared to previous generation

High temporary overload

Input power factor 0.99 : PFC to avoid oversizing of the network and/or generator

Unity output power factor : every 1kVA=1kW, for greater availability of active power on the load

Double conversion efficiency : over 96%, while in **ECO Mode** the efficiency increases up to 99% and significant energy saving performance

Extra Powerful Battery Charger: Each module's chargers are parallel redundant with multiple charging capability that ensures minimum charging times for a completely flat battery and quick charge recovery.
An extra-powerful charger on all models can recharge strings of high-capacity batteries even after extended power outages.

BMS : *Battery Management System* to monitor the health status of the battery

LCD Touch screen : A multilingual user interface that allows detailed control and monitoring of system measurements, diagnosis and performance.

Smart Fans: With automatic speed control, effectively save energy and reduce noise and extend their life.

Protections : oversized modular and boxed switches to support the maximum performance of the UPS continuously and best protect the load

Industrial Carpentry : designed ad hoc, with special anti-rust treatments to last over time even in saline environments

Cabling : Oversized cables characterized as Flame Retardant

Batteries : select the best European brands that guarantee perfect compliance with European standards and availability of spare parts in a short time

Battery Sizing : Batteries sized according to IEEE485 Standard to ensure the required autonomy based on a standard calculation method

Communication:

- SNMP Communication Protocol,
- Modbus TCP/IP or RS485
- voltage-free alarm relays
- USB interface

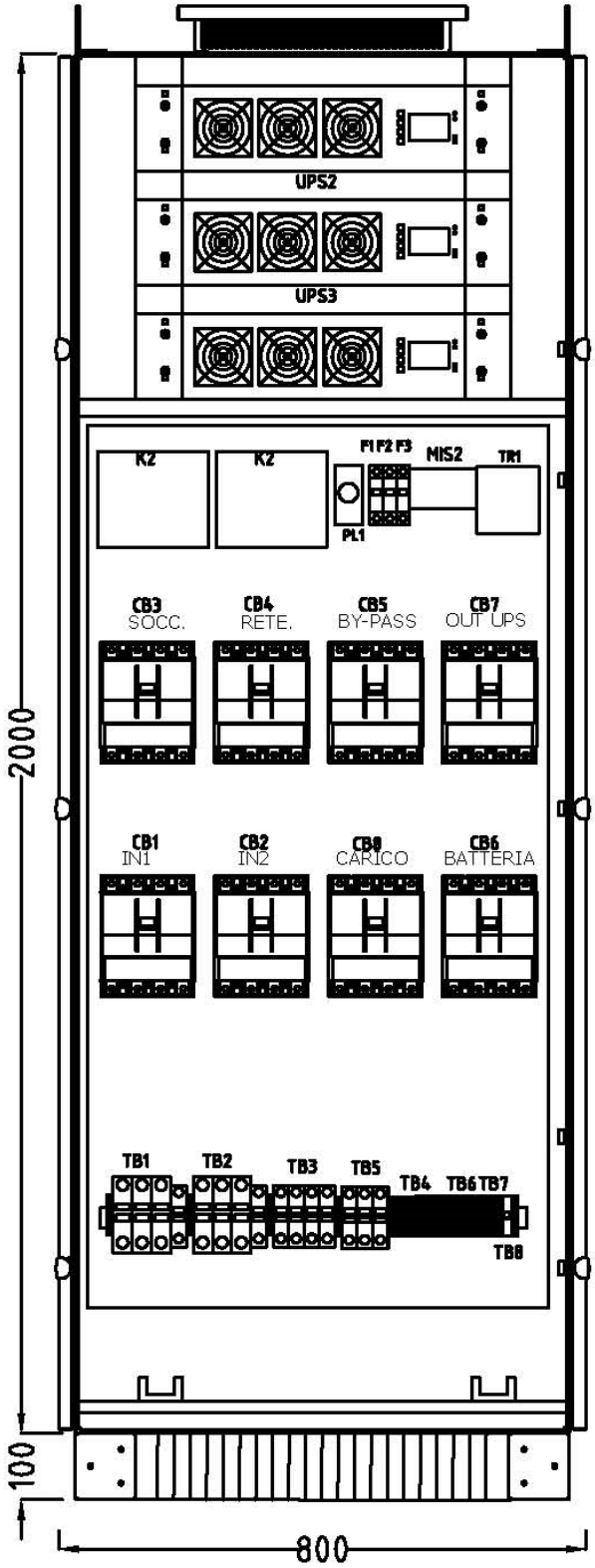
PRIMAX TECHNOLOGIES®

UPS MODULES DATASHEET

Technical Specifications

Ratings (kVA)	10	15	20	30	40
Input					
Nominal input voltage (V)	380/400/415 (three-phase + neutral)				380/400/415 (Line voltage)
Input voltage range without battery discharge (V)	173 to 498*				176 ~ 288, at full load 100Vac ~ 176Vac, linear derating 100Vac, at half load
Nominal input frequency (Hz)	50/60				
Input frequency range (Hz)	40 ~ 70				
Bypass voltage tolerance (%)	selectable from +20 to -40				Upper limit: +10%, +15% or +20%; default: +20%; Lower limit: -10%, -20%, -30% or -40%; default: -40%
Bypass frequency tolerance (%)	±20 (±10 selectable)				±5Hz, ±10Hz
Input power factor at full load (kW/kVA)	0.99				≥0.99, at full load; ≥0.98, at half load
Current THD at full linear load (THDI%)	≤3*				<3% (for linear full load)
Battery Management					
Battery blocks per string	24-40*			32-40	32-40**
Voltage temperature compensation (mV/°C/Cell)	-3				default 3 mV/cell/, can be set 0 5mV/ cell/ from Paramset
Battery charger max. current (A)	13				≤ 13A
Output					
Nominal output voltage (V)	380/400/415 (three-phase) or 220/230/240 (single-phase)			380/400/415 (three-phase)	
Nominal output frequency (Hz)	50/60				
Maximum active power (kW)	10	15	20	30	40
THDv at full linear load (%)	≤2				< 2% (linear load); < 5% (non-linear load)
Inverter overload capacity at 25°C	105% for 60 min 125% 5 min 150% for 1 min > 150%, 200 ms			105% for 60 min 125% 10 min 150% for 1 min > 150%, 200 ms	Up to 105% continuous 105%-125% for 10 min 125%-150% for 1 min > 150%, 200 ms
Efficiency					
Double conversion efficiency	Up to 96.2%				96.6%
ECO Mode Efficiency	Up to 99%				99%
Dimensions and Weight					
Dimensions (W x D x H) (mm)	430 x 500 x 130 (UPS) 430 x 500 x 130 (Battery module 3U, 16 x 9 Ah) 430 x 650 x 85 (Battery module 2U, 16 x 9 Ah) 430 x 500 x 175 (single POD), 430 x 500 x 260 (1+1 parallel POD)			430 x 500 x 130 (UPS) 430x500x175 (single POD) 430 x 500 x 260 (1+1 parallel POD)	430 x 590 x 130 (3U) *** 430 x 730 x 173 (4U) (single POD) 430 x 730 x 261 (6U) (1+1 parallel POD)
Net Weight (kg)	23 (UPS) 51 (Battery module 3U, 16 x 9 Ah) 51 (Battery module 2U, 16 x 9 Ah) 18 (single POD), 30 (1+1 parallel POD)			23 (UPS) 18 (single POD) 30 (1+1 parallel POD)	30/52 (UPS) 20/30 (Single POD) 28/43 (1+1 Parallel POD)
General					
Noise at 1 m (dBA)		≤58		<60	63
Ventilation	Front to back				
Maximum altitude	1500 m without derating (max. 3000 m)				
Protection level IEC (60529)	IP20				
General and safety requirements for UPS	EN/IEC/AS/BS 62040-4				
EMC requirements for UPS	EN/IEC/AS/BS 62040-2				
UPS classification according to CEI EN 62040-3	VFI-SS-111				
Enviromental aspects	EN/IEC/BS 62040-4				

Example of a three-phase-three-phase UPS with a power of 120 kW, based on 3 UPS modules of 40 kW each



Depth 1000mm