



illustrative photo

Designed for the most demanding applications

- Designed to protect industrial processes.
- A compact solution with isolation transformer and integrated batteries.
- Robust enclosure (2 mm thick heavy steel structure).
- Floor anchoring (to prevent tilting).
- Standard IP31 protection degree.
- Dust and water splash resistant enclosure (IP52) with easy replaceable dust filters (option).
- Operation at temperature up to 50 °C.
- Wide input voltage tolerance from -40 % up to +20 % of nominal voltage.
- Double EMC immunity compared to UPS international standard IEC 62040-2.
- Double overvoltage protection.

Process continuity

- Frontal access for input/output cabling, spares replacement and preventative maintenance.
- Scalable power and high availability (using redundancy), with the facility to parallel up to 6 units.

Easy integration into industrial networks

- Input power factor > 0.99 and input current harmonic distortion < 3% thanks to IGBT rectifier.
- Compatible with Open Vented Lead Acid, Valve Regulated Lead Acid (VRLA) and Nickel Cadmium batteries.
- User-friendly multilingual interface with graphic display.

- Flexible communication boards for every industrial communication need: dry contacts, MODBUS, PROFIBUS, etc.
- Fully compatible with generator sets.
- K-rated galvanic isolation transformer embedded.
- Adaptation to typical industrial voltages (input and output).

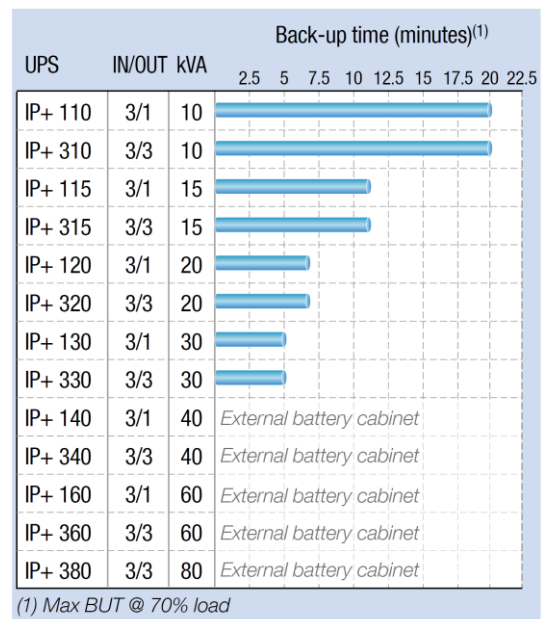
For industrial loads

- 100 % non-linear loads.
- 100 % unbalanced loads.
- 100 % "6-pulse" loads (motor speed drivers, welding equipment, power supplies...).
- Motors, lamps, capacitive loads.

Standard electrical features

- Dual input mains.
- Internal maintenance bypass.
- Backfeed protection: detection circuit.
- EBS (Expert Battery System) for battery management.

UPS and batteries



Electrical options

- Long-life batteries.
- External battery cabinet (degree of protection up to IP32).
- External temperature sensor.
- Additional battery chargers.
- Additional transformer.
- Parallel kit.
- Cold start.
- ACS synchronization system.

- Neutral creation kit for mains without neutral.
- Tropicalization and anti-corrosion protection for electrical boards.

Standard communication features

- Multilanguage graphic display.
- Dry contact interface.
- MODBUS RTU.
- Embedded LAN interface (web pages, email).
- 2 slots for communication options.

Communication options

- PROFIBUS.
- MODBUS TCP.
- NET VISION: professional WEB/SNMP interface for UPS monitoring and shutdown management of several operating systems.

Remote monitoring service

- LINK-UPS, remote monitoring service that connects your UPS to your Critical Power specialist 24/7.

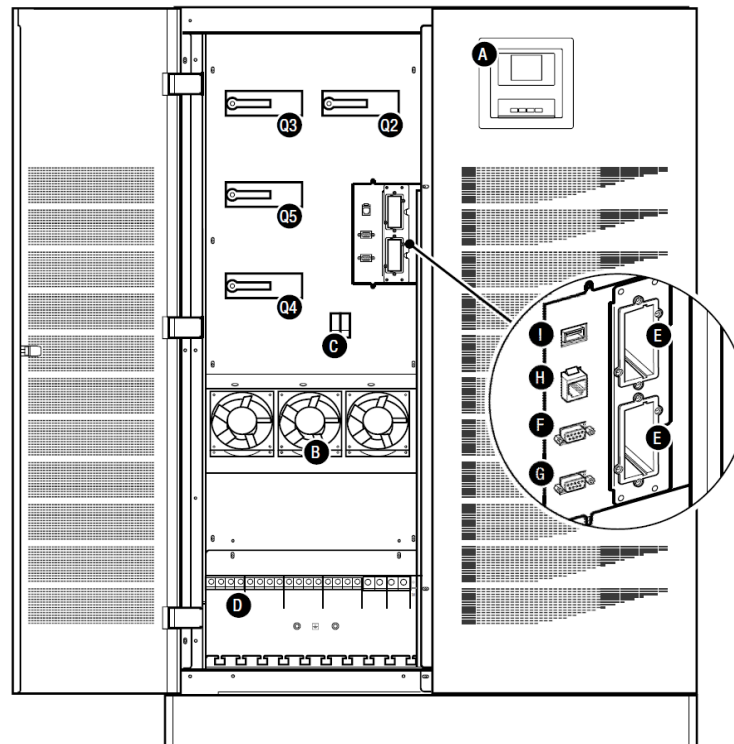
Energy storage option: ultracapacitor

Ultracapacitor could be a suitable battery replacement in special situations where a long back-up time is not required. This solution is targeted specifically to ride-through frequent voltage dips and short power outages, or simply bridge the startup of a generator, or where ambient temperatures could compromise battery lifetime. This would result in a highly reliable energy storage system that would require no maintenance.

Advantages

- Extremely long lifetime: 15 years with virtually unlimited cycling.
- High-reliability – No maintenance.
- Wide temperature range up to 45 °C.
- Ultra rapid charging.
- Battery-free, lead-free and environment-friendly.

MASTERYS IP+ with battery: switches and interfaces



Description	A – Mimic panel	H – LAN RJ45 connector for Ethernet
	B – Fans	I – USB connector
	C – Fan fuses	Q2 – Input switch (MAINS)
	D – Power connections	Q3 – Output switch
	E- Slot for optional cards	Q4 – Auxiliary mains input switch (AUX MAINS)
	F- Serial RS232/485 connector (JBUS protocol)	Q5 – Output maintenance bypass switch
	G – Serial RS232 connector for Modem	

Technical data

MASTERYS IP+ 10-80								
Nominal power (kVA)	10	15	20	30	40	60	80	
Active power (kW)	10	15	20	30	40	60	80	
Input / output 3/1	9	13,5	18	27	32	48	-	
Input / output 3/3	9	13,5	18	27	36	48	64	
Parallel configuration (1)	up to 6 units							
Input								
Rated voltage	400 V							
Voltage tolerance	± 20% (2) (up to -40% @ 50% of rated power)							
Rated frequency /Frequency tolerance	50/60 Hz ± 10 %							
Power factor / THDI (3)	> 0.99 / < 3 %							
Output								
Rated voltage	1ph + N: 230 V (can be configured 220/240 V) 3ph + N: 400 V (380/415 V configurable)							
Voltage tolerance	±1 %							
Rated frequency	50/60 Hz							
Frequency tolerance	± 2% (configurable from 1% to 8% with generating set)							
Total output voltage distortion - linear load / non-linear load	< 1% / < 5%							
Overload	125% for 10 minutes, 150% for 1 minute (2)							
Crest factor	3:1 (complying with IEC 62040-3)							
Bypass								
Rated voltage	1ph + N: 230 V, 3ph + N: 400 V							
Voltage tolerance	± 15% (configurable from 10% to 20% with generating set)							
Rated frequency	50/60 Hz							
Frequency tolerance	± 2% (configurable from 1% to 8% with generating set)							
Environment								
Operating ambient temperature	from 0 up to +50 °C (2) (from 15 °C to 25 °C for maximum battery life)							
Relative humidity	0 to 95 % without condensation							
Maximum altitude	1000 m without derating (max. 3000 m)							
Noise level at 1 m	< 52 dBA		< 55 dBA		< 65 dBA			
UPS Cabinet								
Dimension (3/1) w x d x h (mm)	600 x 800 x 1400				1000 x 835 x 1400			
Dimension (3/3) w x d x h (mm)	600 x 800 x 1400					1000 x 835 x 1400		
Weight (3/1) (kg)	230	250	270	330	490	540	-	
Weight (3/3) (kg)	230	250	270	330	370	500	550	
Degree of protection	IP31 and IP52					IP31		
Colours	RAL 7012							
Standards								
Safety	IEC/EN 62040-1, AS 62040.1.1, AS 62040.1.2							
EMC	IEC/EN 62040-2, AS 62040.2							
Performance	IEC/EN 62040-3, AS 62040.3							
Product declaration	CE, RCM (E2376)							

- 1) With transformer on input/bypass side.
- 2) Conditions apply
- 3) At source THDV < 2 % and nominal load