

Single-phase
and three-phase
UPS

MASTERYS IP+

from 10 to 80 kVA

high reliability in harsh industrial environments

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 frame).
- Floor anchoring (to prevent tilting).
- IP31 and IP52 protection degree for harsh environment with easy replaceable dust filters.
- Wide input voltage tolerance from -40% up to +20% of nominal voltage.
- Double EMC immunity comparing to UPS international standard IEC 62040-2.

Cost reductions and energy environmental considerations

- The high efficiency of IP+ reduces energy loss and the systems need for extensive air conditioning.
- ENERGY SAVER power management in parallel configuration.
- EXPERT BATTERY SYSTEM for battery management and reliability.

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 network

- 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.



The MASTERYS IP+ series is certified by TÜV SÜD with regard to product safety (EN 62040-1).

MASTERYS IP+ efficiency is verified by TÜV SÜD.



GAMME 140 A

Your protection for

- > Industrial processes
- > Services
- > Medical



Range

Model ⁽¹⁾	Input/output	kVA	Back-up time std
IP+ 110	3/1	10	20'
IP+ 310	3/3	10	20'
IP+ 115	3/1	15	11'
IP+ 315	3/3	15	11'
IP+ 120	3/1	20	7'
IP+ 320	3/3	20	7'
IP+ 130	3/1	30	5'
IP+ 330	3/3	30	5'
IP+ 140	3/1	40	external bat.
IP+ 340	3/3	40	external bat.
IP+ 160	3/1	60	external bat.
IP+ 360	3/3	60	external bat.
IP+ 380	3/3	80	external bat.

Back-up time at 70% of the load.

For industrial loads

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

Standard electrical features

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

Technical data

kVA	10	15	20	30	40	60	80
kW - Input/output: 3/1	9	13.5	18	27	32	48	-
kW - Input/output: 3/3	9	13.5	18	27	36	48	64
Parallel configuration ⁽¹⁾	up to 6 units						
INPUT							
Nominal voltage	(3ph + N) 400 V ± 20% ⁽³⁾ (up to -40% at 50% Pn)						
Input frequency	50/60 Hz ± 10%						
Power factor/THDI ⁽²⁾	0.99 / < 3%						
OUTPUT							
Output voltage	if 1ph + N 230 V ± 1% (can be configured 220/240 V) if 3ph + N 400 V ± 1% (380/415 V configurable) ⁽³⁾						
Output frequency	50/60 Hz ± 2% (can be configured from 1% to 8% with generating set)						
Automatic bypass	nominal output voltage ± 15% (configurable from 10% to 20% with generating set)						
Overload	125% for 10', 150% for 60"						
Crest factor	3:1 (complying with IEC 62040-3)						
PF acceptable without de-rating	up to 0.9 lead. (up to 0.7 lead for 10 min)						
EFFICIENCY							
Online mode @ 50% of load ⁽⁴⁾	up to 96%						
Online mode @ 75% of load ⁽⁴⁾	up to 96%						
Online mode @ 100% of load ⁽⁴⁾	up to 95.5%						
Efficiency in ECO-MODE	up to 98%						
ENVIRONMENT							
Operating ambient temperature	0 °C to +40 °C (15 °C to 25 °C for best battery life)						
Storage temperature range	-5 to +45 °C (15 °C to 25 °C for best battery life)						
Relative humidity	0% - 95% without condensation						
Maximum altitude	1000 m without de-rating (maximum 3000 m)						
Noise level (ISO 3746)	< 52 dB		< 55 dB		< 65 dB		
UPS CABINET							
Dimensions W x D x H (mm) input/output: 3/1	600 x 800 x 1400			1000 x 835 x 1400		-	
Dimensions W x D x H (mm) input/output: 3/3	600 x 800 x 1400			1000 x 835 x 1400		-	
Weight (kg) input/output: 3/1	230	250	270	330	490	540	-
Weight (kg) input/output: 3/3	230	250	270	320	370	500	550
Degree of protection	IP31 and IP52 (according to IEC 60529)						
STANDARDS							
Safety	EN 62040-1 (TÜV SÜD certified), EN 60950-1						
Performance and Topology	EN 62040-3 [VFI-SS-111]						
EMC standard	EN 62040-2 (2nd Edition)						
Product certification	CE						

(1) With transformer on input/bypass side. (2) For source THDV < 2% and nominal load.
(3) Three-phase 220 - 230 - 240 V from 15 to 40 kVA. (4) With transformer on bypass side.

Electrical options

- Long life batteries.
- External battery cabinet.
- External temperature sensor.
- Additional battery chargers.
- Additional transformer.
- Parallel kit.
- Cold start.
- **ACS** synchronization system.
- Neutral creation kit for mains without neutral.
- Tropicalization and anticorrosion protection for electrical boards.

Standard communication features

- Multilanguage graphic display.
- ADC interface (configurable voltage-free contacts).
- MODBUS/JBUS interface.
- Modem/SMS interface.
- Embedded LAN interface.
- 2 slots for communication options.

Communication options

- Remote panel.
- ADC interface (configurable voltage-free contacts).
- Profibus interface.
- **NET VISION**: professional WEB/SNMP interface for UPS monitoring and shutdown management of several operating systems.
- JNC: shutdown client for workstations and servers for several operating systems.
- OPMANAGER: centralized monitoring program for Windows and Linux via SNMP.

Remote maintenance

- **T.SERVICE**: maintenance software for continuous 24/7 monitoring of the SOCOMECS UPS.