

Single-phase  
and three-phase  
UPS

# MASTERYS IP

from 10 to 40 kVA

for applications in environments with specific constraints  
and industrial processes

## Designed for the most demanding environments

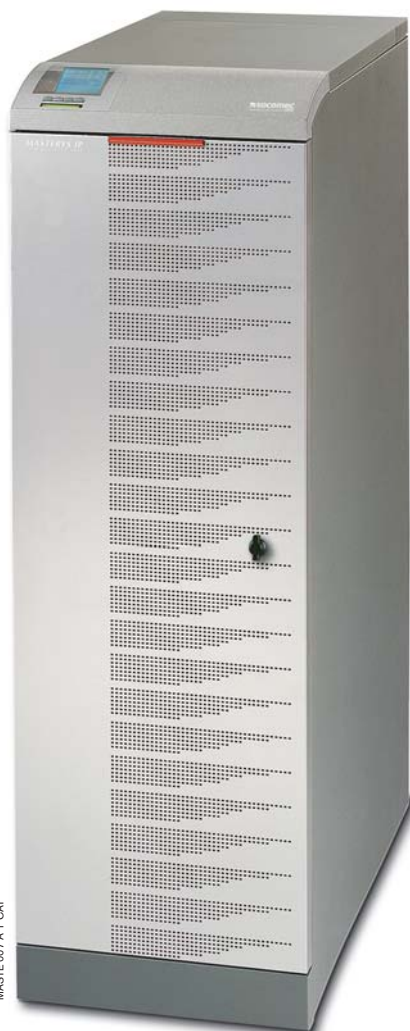
- Designed to protect industrial processes.
- A compact solution with isolation transformer and batteries integrated into the UPS cabinet.
- Metal IP 21 cabinet (IP rating can be increased).

## Tailored to your needs

- Easy to handle (fitted with castors).
- Scalable power or availability (using redundancy) by placing up to 6 units in parallel.
- Very low harmonic distortion (THDI < 3%) via use of an IGBT rectifier [\[Info. p. 98\]](#).
- Interactive: LAN network interface integrated as standard, for improved UPS supervision [\[Info. p. 105\]](#).
- Graphic display for total system control.
- Redundant batteries: the battery packs are connected to each other in two distinct strings. If one battery in a string is not functioning, it does not compromise the back-up time provided by all the batteries belonging to the other string.
- EXPERT BATTERY SYSTEM for battery management [\[Info. p. 106\]](#).
- ALWAYS ON MODE energy saving operation without upstream harmonic feedback [\[Info. p. 99\]](#).
- GLOBAL SUPPLY SYSTEM generating set management [\[Info. p. 104\]](#).
- ENERGY SAVER power management in parallel configuration [\[Info. p. 99\]](#).
- Protection against backfeed on the upstream network (internal or external backfeed).
- Separate rectifier and bypass networks.
- Internal maintenance manual bypass.
- ADC remote signalling interface: dry contacts.



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



Your protection for

- > Industrial processes
- > Services
- > Medical

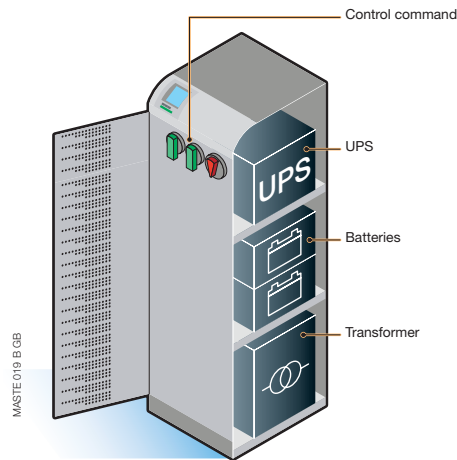


## Range

| Model  | 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  | 6'               |
| IP 320 | 3/3          | 20  | 6'               |
| IP 330 | 3/3          | 30  | 4'               |
| IP 340 | 3/3          | 40  | external bat.    |

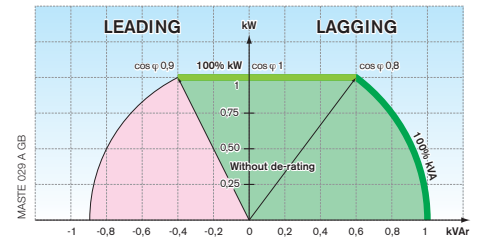
Back-up time at 75% of the load.

## Internal architecture



## Supply of lagging and leading loads

[Info. p. 97]



## Standard equipment

- RS 232/485 serial port.
- Additional RS 232 interface.
- Integrated LAN interface.
- 2 slots for interfaces.
- ADC interface (configurable dry contacts).
- Integrated galvanic isolation transformer.

## Accessories

- Parallel kit.
- Power share (load shedding outputs).
- External maintenance bypass.
- Extended back-up time.
- Additional battery charger.
- Permanent isolation controller (CPI).
- **ACS** synchronisation system [Info. p. 70 and 74].

## Communication options

- Remote access panel.
- **GSS** interface (generating set management)
- **UNI VISION PRO** software to manage connected applications and control automatic shutdowns. Serial cable included [Info. p. 93].
- **NET VISION** interface WEB/SNMP manager for connecting the UPS to the Ethernet network [Info. p. 93].

## Remote maintenance

- **T.SERVICE** for permanent contact between your **MASTERY'S** and the **SOCOMECSICON** UPS maintenance service [Info. p. 110].

## Technical data

| kVA  | 10   | 15         | 20         | 30         | 40        |
|--|--|------------|------------|------------|-----------|
| kW   | 8  | 12         | 16         | 24         |           |
| Input/output: 3/1                                  | ●  | ●          | ●          |            |           |
| Input/output: 3/3                                  | ●  | ●          | ●          | ●          | ●         |
| Parallel configuration                             | up to 6 units  |            |            |            |           |
| <b>INPUT</b>                                       |  |            |            |            |           |
| Nominal voltage                                    | (3ph + N) 400 V ± 20% (2) (up to -35% at 70% nominal load)   |            |            |            |           |
| Input frequency                                    | 50/60 Hz ± 10%   |            |            |            |           |
| Power factor/THDI (1)                              | 0.99 / <3%   |            |            |            |           |
| <b>OUTPUT</b>                                      |  |            |            |            |           |
| Output voltage                                     | if single-phase 230 V ± 1% (can be configured 220/240 V)<br>if three-phase 400 ± 1% (380/415 V configurable) (2) |            |            |            |           |
| Output frequency                                   | 50/60 Hz ± 2%<br>(configurable with generating set from 1% to 8%)  |            |            |            |           |
| Automatic bypass                                   | Nominal output voltage ± 15%<br>(configurable with generating set from 10% to 20%)                               |            |            |            |           |
| Overload   | 125% for 10 minutes / 150% for 60 seconds  |            |            |            |           |
| 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.)  |            |            |            |           |
| <b>EFFICIENCY</b>                                  |  |            |            |            |           |
| Global efficiency (On-line)                        | up to 90%  |            |            |            |           |
| Efficiency in <b>ECO-MODE</b>                      | up to 97%  |            |            |            |           |
| Efficiency in <b>ALWAYS-ON MODE</b>                | up to 95%  |            |            |            |           |
| <b>ENVIRONMENT</b>                                 |  |            |            |            |           |
| Operating ambient temperature                      | 0 °C + 40 °C (best battery life from 15 °C to 25 °C)   |            |            |            |           |
| Storage temperature range                          | -5 °C + 50 °C (best battery life from 15 °C to 25 °C)  |            |            |            |           |
| Relative humidity                                  | 0% - 95% without condensation  |            |            |            |           |
| Maximum altitude                                   | 1000 m no de-rating (maximum 3000 m)   |            |            |            |           |
| Noise level (ISO 3746)                             | < 55 dB  |            |            | < 62 dB    |           |
| <b>WEIGHT (kg)</b>                                 |  |            |            |            |           |
| Weight (with standard batteries)                   | 300  | 310        | 350        | 400        | 340 (3)   |
| <b>DIMENSIONS (WxDxH) and BACK-UP TIME in min.</b> |  |            |            |            |           |
| Cabinet type T (Tall)<br>(444 x 795 x 1400 mm)     |  | 20'        | 11'        | 8'         | 5'        |
| Standard configuration                             |  |            |            |            |           |
| Max. B.U.T. (4)                                    | up to 500'   | up to 300' | up to 200' | up to 130' | up to 90' |
| <b>STANDARDS</b>                                   |  |            |            |            |           |
| Safety   | IEC 62040-1-1 (TÜV SÜD certified), IEC 60950-1-1   |            |            |            |           |
| Performance & topology                             | (EN) IEC 62040-3 [VFI-SS-111]  |            |            |            |           |
| EMC standard                                       | (EN) IEC 62040-2 (2nd edition) EN 50091-2  |            |            |            |           |
| Product certification                              | CE   |            |            |            |           |
| IP rating  | IP 21 (according to IEC 60529), IP 31 optional   |            |            |            |           |

Indicated back-up time at 75% load

(1) for source THDV < 2% and nominal load - (2) Three-phase 220 - 230 - 240 V from 15 to 30 kVA on demand

(3) without batteries - (4) Back-up time.