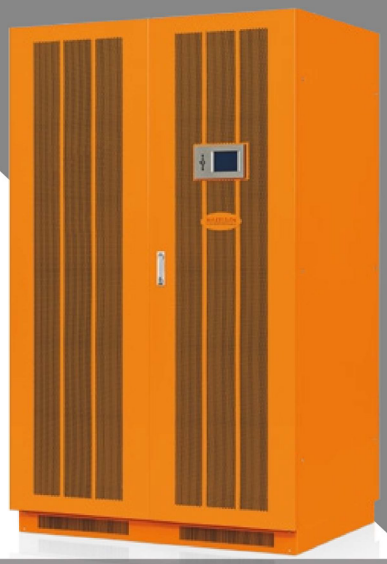
Aytemiz MAKELSAN
Uninterruptible Power Supplies/Generator

POWER FORLIFE

HOME/OFFICE | EMERGENCY | MEDICAL | INDUSTRY | DATA CENTER | TRANSPORT

# PM
## SERIES ON-LINE UPS
## 50-600 kVA



- High power factor 1.0
- High efficiency 96.5%
- High adaptability
- Power flexibility from 50 - 600 kW
- Modular hot-swappable & Scalability
- High MTBF and low MTTR

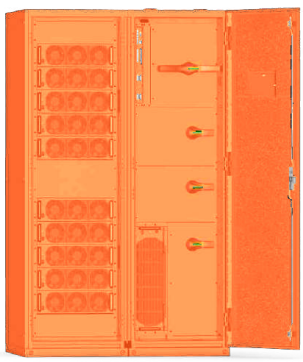
VFI TYPE ON-LINE UPS | TOWER | 1.0 POWER FACTOR | 24 SERVİCE

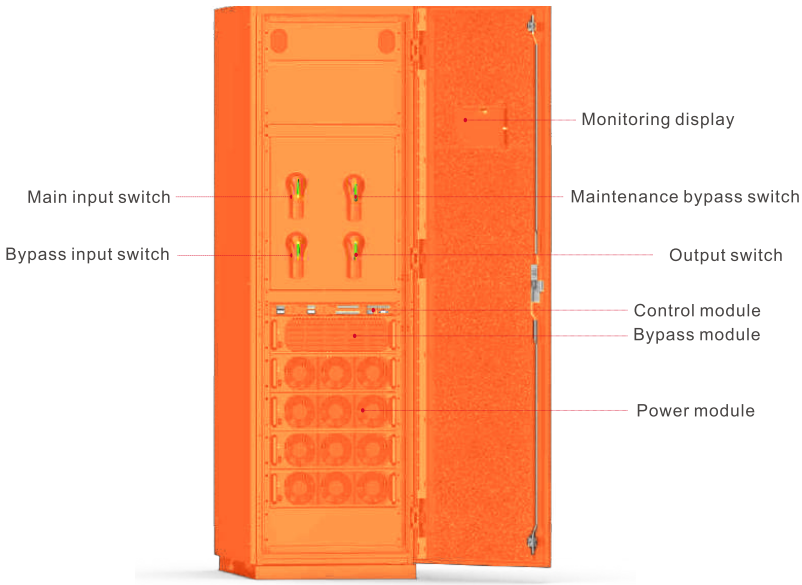
CE TSE TSE-HYB

PM Series modular UPS is ideal for reliable, saving, intelligent and easy solutions. It ensures that a scalable, secure, high quality power supply is available for any critical high-density computer and IT environment applications, such as data centers and other critical loads.

PM Series modular UPS is a scalable three-phase / three-phase uninterruptible power supply system with DSP technology and provides true on-line double conversion power protection. The available UPS power and redundancy level can expand vertically from 50 to 600 kVA /600 kW in one single power cabinet, and four power cabinets can be connected in parallel, increasing the capacity up to 2.4 MkW. It features modular hot-swappable design, all modules support "plug & play", including power modules, bypass module, and control module, simplifies UPS servicing and maintenance.







# PM SERIES ON-LINE UPS
# 50-600 kVA

POWER FORLIFE

- DSP digital control technology
- Flexible modularity and easy scalability with all hot-swappable module design
- High efficiency at low load rate: 96% at 40% rated load and 95% at 20% rated load
- High power density of 50 kVA/ 3U power moduler
- High grid adaptability, strong load adaptability and strong overload capability
- Small footprint (500 KVA system only 1.02 m' footprint)
- Inbuilt integrated PDU system, easy installation and saving investment
- Input power factor > 0.99, THDI < 3%, environment friendly and high-efficiency and energy-saving
- Soft-start technology improves generator matching up to 1:1.1
- Support two modes of frequency conversion: 50 Hz input/ 60 Hz output and 60 Hz input/ 50 Hz output
- Intelligent hibernation design enables UPS to operate efficiently at low load rate
- Advanced parallel expansion technology, support 4 units in parallel
- Share battery pack in parallel operation, saving user's battery cost
- Flexible charger parameter and battery configuration setting, numbers of battery 30~ 46 pcs selectable
- Intelligent battery management (Intelligent charge/discharge management and float charging voltage temperature compensation), extending battery lifespan
- Support battery cold start and utility self boot
- Self-aging function, easy debugging and test on site
- Fault-tolerant design for fan system: 30% load can be driven when 2 fans fail and 50% load when 1 fan fails
- Front accessible maintenance, top/bottom cable entry compatible
- Intelligent battery management, automatic floating/equalizing charge control, battery self-diagnosis control, SOC detection, SOH detection and charger hibernation control, extending battery lifespan
- Complete hardware and software protection function, robust self-diagnostic function, and abundant event log for check
- 7 inches LCD touch screen, friendly human-machine interface
- Monitoring unit with built-in SNMP, supports RS485 and dry contacts

## Power Module



## Bypass Module



## Control Module




| | | | | | |
|---|---|---|---|---|---|
| ① Parallel port | ② LED indicator | ③ DRY_IN | ④ DRY_OUT | ⑤ BTG port | ⑥ BCB port |
| ⑦ BCB tripping signal | ⑧ EPO port | ⑨ Switch state port of power distribut cabinet | ⑩ SPD port | ⑪ Environmental temperature port | ⑫ Battery temperature compensation port |
| ⑬ CAN port | ⑭ RS485 port 1 | ⑮ RS485 port 2 | ⑯ Ethernet port | ⑰ USB port | ⑱ LCD screen port |

# PM
## SERIES ON-LINE UPS
## 50-600 kVA



| | | | | | | |
|---|---|---|---|---|---|---|
| MODEL | Rated capacity | 200 kVA/200 kW | 300 kVA/300 kW | 400 kVA/400 kW | 500 kVA/500 kW | 600 kVA/600 kW |
| | Number of power module | 4 | 6 | 8 | 10 | 12 |
| | Rated capacity of power module | 50 kVA | | | | |
| INPUT | Input wiring | 3 Ph + N + PE | | | | |
| | Rated voltage | 380 / 400 / 415 Vac | | | | |
| | Voltage range | 138 ~ 485 Vac (305 ~ 485 Vac without power downgrading;<br>138 ~ 305 Vac with linear downgrading 40%) | | | | |
| | Input frequency | 40 ~ 70 Hz | | | | |
| | Power factor | ⩾ 0.99 | | | | |
| | Current distortion | < 3% | | | | |
| BATTERIES | Battery voltage | ± 240 Vdc (±180, ± 192, ± 204, ± 216, ± 228, ± 252, ± 264, ± 2 | | | | |
| | Number of battery | 40 pcs 12 V batteries ( 30 / 32 / 34 / 36 / 38 / 4 | | | | |
| OUTPUT | Output wiring | 3Ph + N + PE | | | | |
| | Rated voltage | 380 / 400 / 415 Vac ±1% | | | | |
| | Frequency | Synchronized with utility in mains power mode:<br>50 Hz / 60 Hz ± 0.25% in battery mode | | | | |
| | Power factor | 1 | | | | |
| | Voltage distortion | ≤ 1% with linear load / ≤ 3 % with non-linear load | | | | |
| | Crest factor | 3:1 | | | | |
| | Inverter overload capacity | 105% < load ≤ 110%: transfer to bypass in 60 min<br>110% < load ≤ 125%: transfer to bypass in 10 min<br>125% < load ≤ 150%: transfer to bypass in 1 min<br>Load > 150%: transfer to bypass in 200 ms | | | | |
| | Bypass overload capacity | Load ≤135% for long term; < 1000% load for 100 ms | | | | |
| SYSTEM | Efficiency | 96.5 % | | | | |
| | Max. number of parallel connections | 4 units | | | | |
| | Transfer time | 0 ms | | | | |
| | Protections | Short circuit protection, overload protection, over-temperature protection, battery low voltage protection, output over/low voltage protection, fans failure protection etc. | | | | |
| | Communications | RS485, dry contacts, SNMP | | | | |
| | Display | 7 inches LCD touch screen | | | | |
| OTHERS | Operating temperature | 0 ~ 40℃ | | | | |
| | Storage temperature | -40℃ ~ +70℃ | | | | |
| | Humidity | 0 ~ 95% (non-condensing) | | | | |
| | Altitude | ≤ 1000 m. Above 1000 m, derating 1% for each additional 100 m | | | | |
| | Protection level | IP 20 | | | | |
| | Noise level at 1 m | < 65 dB | < 68 dB | | | |
| | Cabinet dimensions (W × D × H) (mm) | 600 × 850 × 2000 | | 1200 × 850 × 2000 | | 1400 × 850 × 2000 |
| | UPS module dimensions (W × D × H) (mm) | 440 × 620 × 130 | | | | |
| | Cabinet weight (kg) | 233 | 242 | 415 | 465 | 617 |
| | Power module weight (kg) | 32 | | | | |

All specifications are subject to change without notice.



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