

**pmu**plus

## Modular ON-LINE UPS System from 10-2080kVA

### Decentralised parallel structure concept

- Eliminate single point of failure
- Swappable modular concept

### Modular N + X parallel redundancy

- Parallel up to 13 modules
- Load sharing
- More than 1 module can be set as redundant

### Parallel up to 13 modules for each rack

- H=1.4M/1.6M : up to 5 modules
- H=2.0M : up to 13 modules
- UPS modules/battery modules
- UPS system parallel maximum: 4



200/250/320k

400k/520k

60k/100k  
90k/150k  
200k



### Invest as you grow

- Buy now for what you need
- Increase as you grow
- Flexibility/scalability for expansion

### Plug-and-play hot swappable module

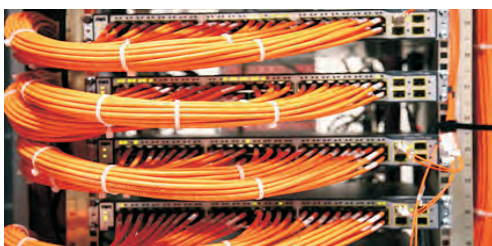
### Module LCD Display

### Versatile Comm Interfaces

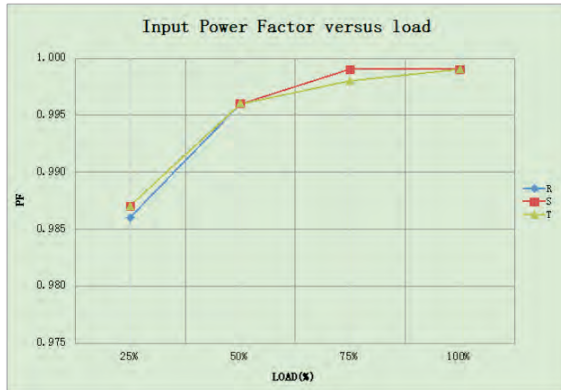
- RS485 Ports
- RS232 Port
- Mod Bus Port
- 2 x Intelligent slot (SNMP/relay option)

### Applications

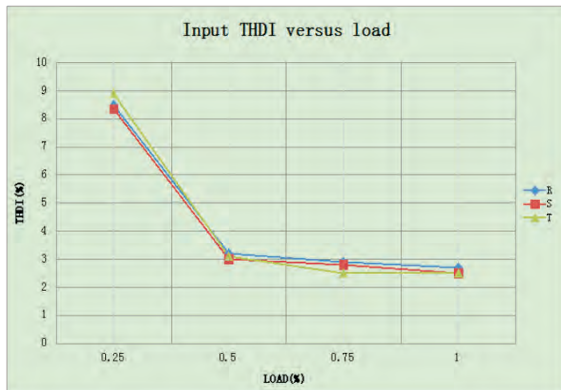
- IT infrastructure
- Telecom switchgear & infrastructure
- Process control equipment
- Security systems, Emergency lighting, Fire protection
- Airport infrastructure
- Bank, Hospital, Healthcare equipment



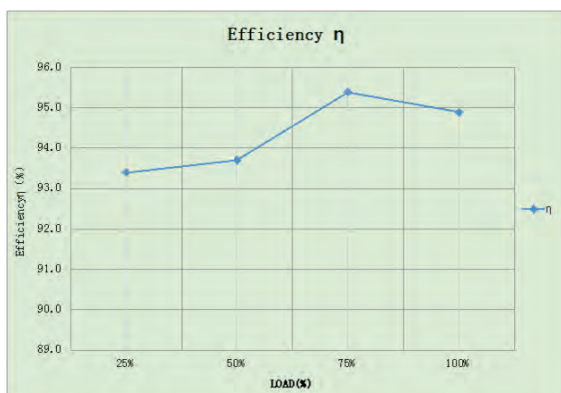
## High input power factor up to 1



## Low input current THDI <3%



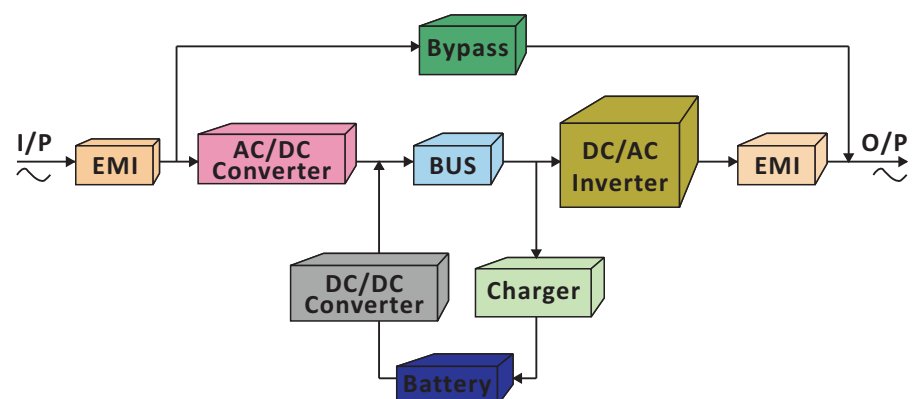
## High efficiency up to 95.5%



## Main features of UPS modules

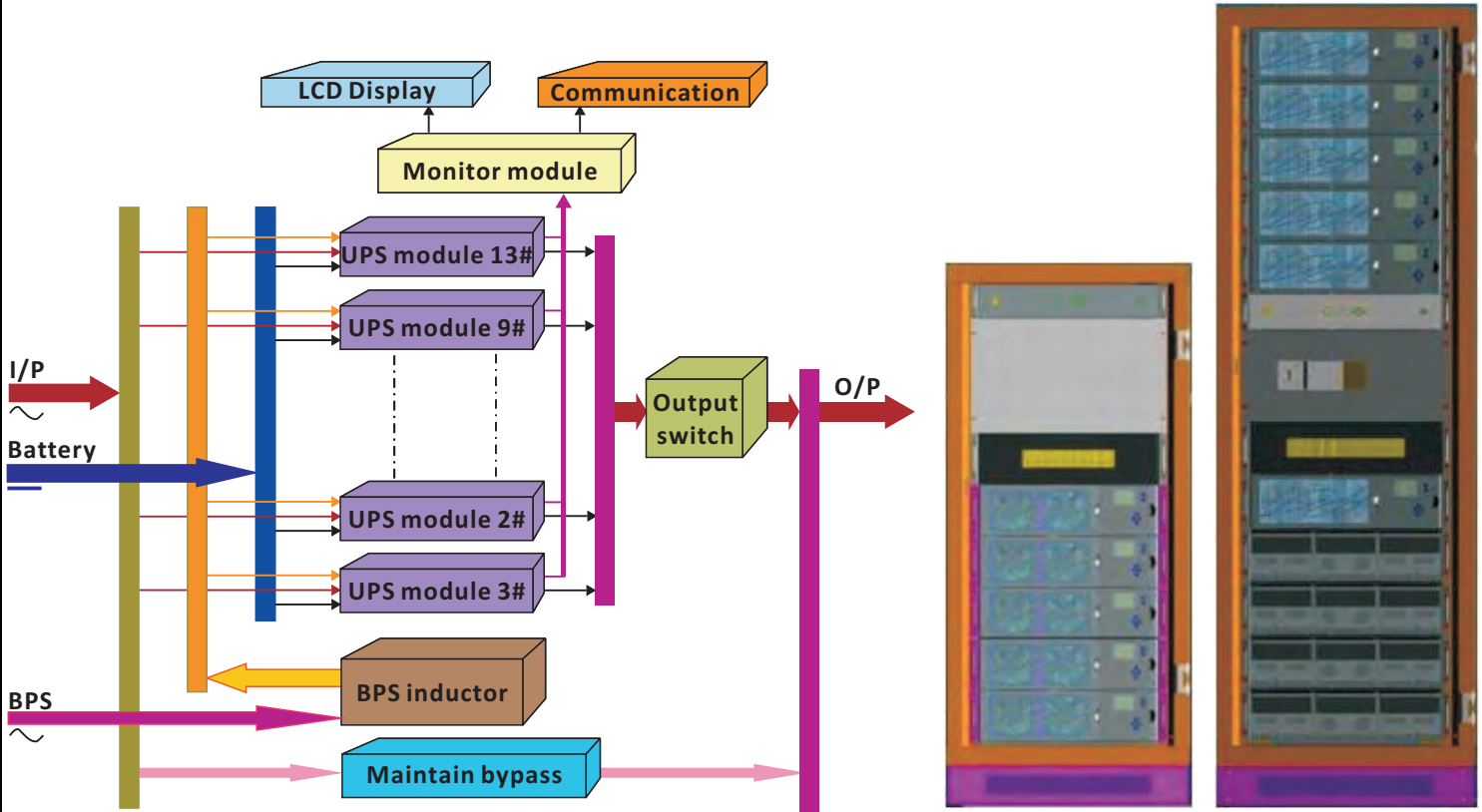
- Modules can fit into standard 19" rack cabinet
- Decentralised parallel structure for module
- Compact in size, only 3U height
- Modular N+X parallel redundancy
- Parallel operation of up to 13 modules for each rack
- Invest as you grow
- High power density to 520KVA per rack
- Common battery
- Wide input voltage: 208~478Vac (3/3)
- Sinusoidal input current THDI <3%
- High input power factor up to 1 (0,99)
- High efficiency up to 95.5%
- Output power factor up to 1
- Plug-and-play hot swappable module
- Remote EPO function
- Controlled monitoring with touch-screen LCD graphic display
- Superior MTBF and MTTR
- Matching battery module also available
- Megatec/MODBUS protocol
- Versatile communication interface

## Single line module diagram





## Cabinet diagram



## UPS modules

Model	Power	Dimension (W x D x H) mm	Weight
PMU+10-RM	10kVA	443 x 580 x 131(3RU)	26kg
PMU+15-RM	15kVA	443 x 580 x 131(3RU)	30kg
PMU+20-RM	20kVA	443 x 580 x 131(3RU)	31kg
PMU+25-RM	25kVA	443 x 580 x 131(3RU)	32kg
PMU+30-RM	30kVA	443 x 580 x 131(3RU)	33kg
PMU+40-RM	40kVA	443 x 580 x 131(3RU)	34kg

## UPS cabinets

Model	Application	Dimension (W x D x H) mm	Weight
PMU+60k	Max.(3+1) x 10/15/20kva modules	600 x 840 x 1400	145kg
PMU+100k	Max.5 x 10/15/20kva modules	600 x 840 x 1400	170kg
PMU+200k	Max.10 x 10/15/20kva modules	600 x 1100 x 2000	270kg
PMU+250k	Max.10 x 25kva modules	600 x 1100 x 2000	290kg
PMU+90k	Max.(3+1) x 30kva modules	600 x 840 x 1400	149kg
PMU+150k	Max.5 x 30kva modules	600 x 840 x 1400	152kg
PMU+300k	Max.10 x 30kva modules	600 x 1100 x 2000	310kg
PMU+200k	Max.5 x 40kva modules	600 x 860 x 1600	205kg
PMU+320k	Max.8 x 40kva modules	600 x 860 x 2000	310kg
PMU+400k/520k	Max.13 x 40kva modules	1200 x 860 x 2000	450kg

# Specifications

pmu<sup>plus</sup> | Modular ON-LINE UPS System  
from 10-2080kVA



Capacity	UPS cabinet		10-30kVA 8-24kW	10-60kVA 9-54kW	10-100kVA 9-90kW	10-200kVA 9-180kW	250kVA 225kW	300kVA 270kW	400kVA 360kW	520kVA 468kW	
	UPS module		4/6/10kVA 3.2/4.8/8kW	10kVA/9kW, 15kVA/13.5kW, 20kVA/18kW			25kVA/22.5kW	30kVA/27kW	40kVA/36kW		
Input	Phase		3 phase 4 wires & earth								
	Rated voltage		380/400/415VAC								
	Voltage range		208-478VAC								
	Frequency range		40-70Hz								
	Power factor		≥0.99								
	Bypass voltage range		Max. Voltage: +15% (optional +5%, +10%, +25%); Min. Voltage: -45% (optional -20%, -30%) Frequency protection range: ±10%								
	Current harmonic		≤5%	≤3% (100% nonlinear load)			≤2% (with linear load) / ≤5% (with nonlinear load)				
	Generator Input		Support								
Output	Phase		3 Phase 4 wires & earth								
	Rated voltage		380/400/415VAC								
	Power factor		0.9								
	Voltage precision		±2%								
	Frequency	Utility mode	1-10% user defined								
		Battery mode	(50/60 ±0.2%)Hz								
	Crest factor		3:1								
	THD		≤2% with linear load; ≤5% with non linear load								
Efficiency (normal mode)			≥90%	≥92%			≥95%				
Communication interface	UPS cabinet		RS232, RS485, Dry contact, Intelligent slots x 2(SNMP, Relay card optional)								
	UPS module		RS232								
Battery	Voltage		±96/108/120VDC	±192V/±204V/±216V/±228V/±240VDC; battery quantity (optional)							
	Charge current	UPS cabinet	10A Max	18A Max	30A Max	60A Max	60A Max	100A Max	130A Max		
		UPS module	6A Max				10A Max				
	Backup time		Battery configuration dependant								
Transfer time			0 ms								
Protection	Overload	AC mode	Load ≤ 110%: 60min; ≤125%: 10min; ≤150%: 1 min; ≥150% transfer to bypass								
		Batt.mode	30s/ 1s/ 200ms	Load ≤ 110%: 10min; ≤125%: 1min; ≤150%: 1s; ≥150% shutdown UPS immediately			Load ≤ 110%: 30s; ≤125%: 1s; ≤150%: 200ms; ≥150% shutdown UPS immediately				
		Bypass mode	4/6/10kVA: 32/40/60A	Breaker(10kVA: 20A/15kVA:32A/20kVA:60A)			40A	Hold whole system 63A		100A	
Operating environment	Temperature		0-40°C								
	Humidity		0-95% non condensing								
	Storage temperature		-25C -55°C								
	Altitude		<1500m								
Other	Dimensions WxDxH mm	UPS cabinet	600x840x1400			600x840x2000	600x1100x2000		1200x860x2000		
		UPS module	443 x 580 x 131mm(3RU)								
	Weight	UPS cabinet	150	145	170	230	290	310	750	860	
		UPS module	4/6/10kVA: 21/23/25kg	10kVA: 26kg; 15kVA: 30kg; 20kVA: 31kg			32	33	35		
Industry standards			CE, EN/IEC 62040-2, EN/IEC 62040-1-1								

Specifications are subject to change without notice.