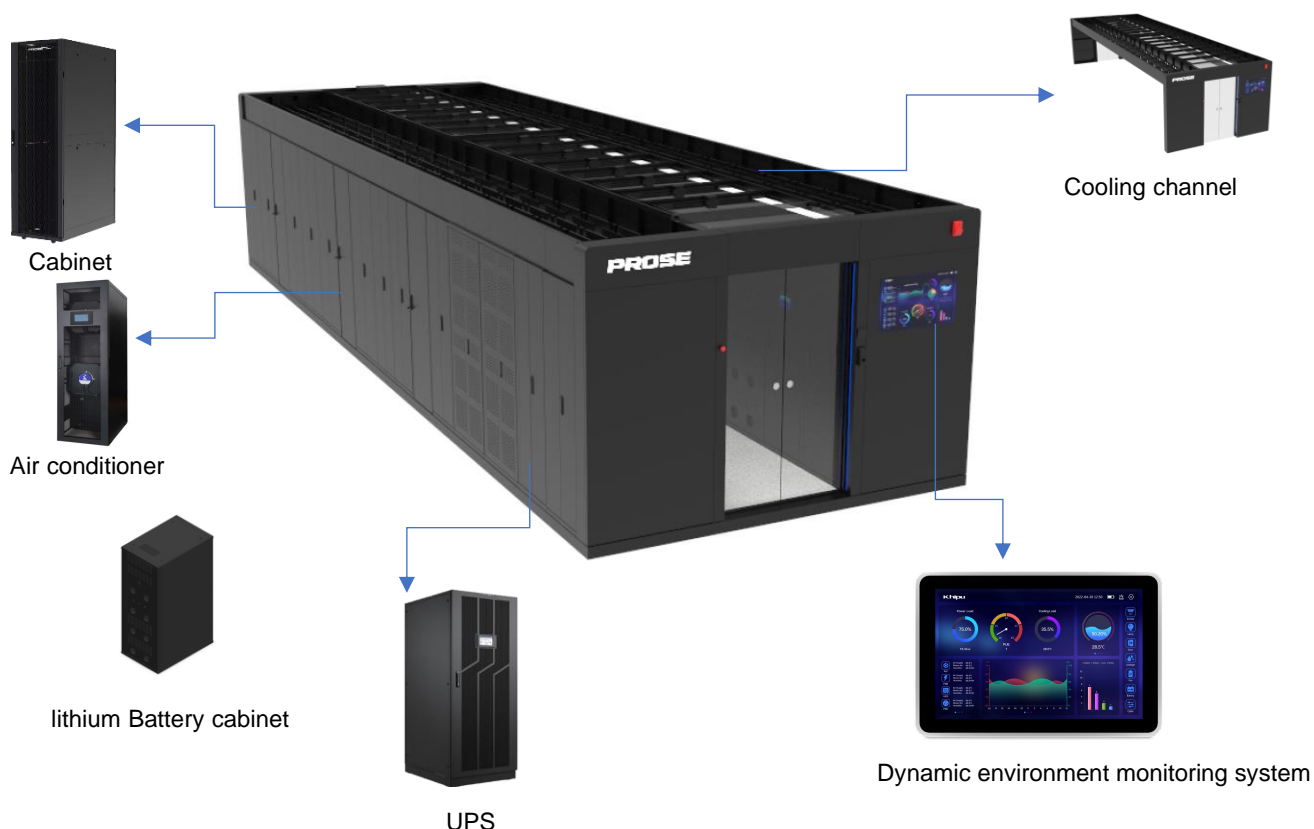## Product Introduction

Modular data center is to make the power distribution system, refrigeration system, dynamic environment monitoring system, fire protection system, security system and cabinet cold aisle system into an intelligent platform, which further improves the safety, reliability, and health of equipment, and is more green and energy-saving.
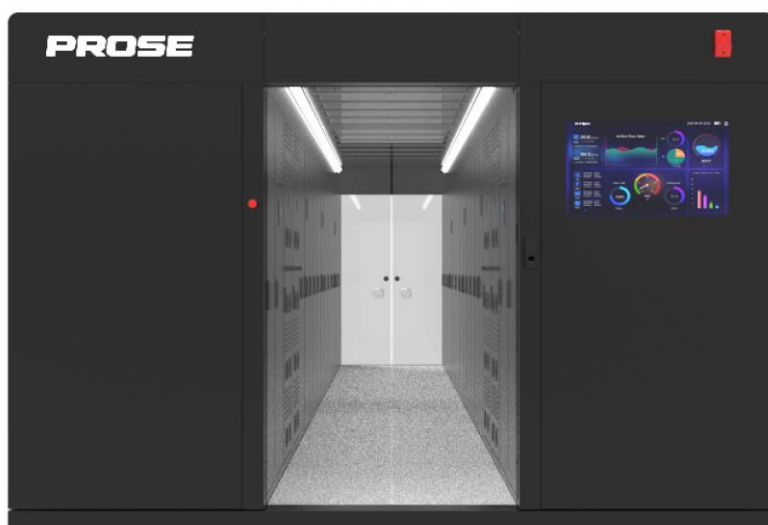
Modular infrastructure can meet the requirements of customers' special needs and usage, meet the requirements of prefabricated production of all modular internal infrastructure and equipment, assemble, and deliver on site quickly, and truly realize the one-stop solution of rapid deployment of IT equipment. It has the characteristics of modular integration, safety, and reliability, saving room floor space and energy, saving time, labor and worry in installation, compatible architecture, quick and flexible deployment, intelligent monitoring, efficient and stable refrigeration, etc. It is a new generation of intelligent micro-module data center products.

Main Feature

- Lower Investment by 25%
- Fast Installation Only 7 days
- FC AC Energy Saving 30%
- PUE Less Than 1.25
- System Emergency Response Protection
- Biometrics Authentication
- Cascading Available for Rack
- Saving Room Space 50%
- DCIM 24H Cloud O&M

Cooling channel

Cabinet

Air conditioner

lithium Battery cabinet

UPS

Dynamic environment monitoring system

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BRW-DS-T-6393
ECN: CN AC21-387

Rev. 0.2 | **1 / 26**

Layout

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BRW-DS-T-6393
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Rev. 0.2 | **2 / 26**

Server Cabinet

In order to adapt to different application scenarios, PROSE provide server cabinet, to meet the different needs of customers in cost, use space, portability and other aspects.

Item	Server Cabinet
Static Load	2200kg static load rating, 1200kg Dynamic load rating
Color	Black
Standard	Compliance with EIA-310-E, IEC297-2, DIN41491; PART1, DIN41494; PART7, GB/T3047.2-92 standard; Compatible with ETSI standard
Frame	1.5mm SPCC
Mounting Rails	2.0mm SPCC,4pcs
Top panels	1.2mm SPCC
Bottom Panel	1.2mm SPCC
Front Door	Single mesh door, Opening density70%,1.5mm
Rear Door	Double mesh door, Opening density70%,1.5mm
Side Door	2 set
Fixed Tray	2 pcs
Sliding Tray	1 pc
Fan	4pcs, AC220V
Plastic Vertical Cable Manager Panel	2pcs
Size(W*D*H)mm	600/800*1200*42U

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ECN: CN AC21-387

Rev. 0.2 | **3 / 26**

PDU（Power Distribution Unit）

Item	Specification
Rated current	32A
Rated voltage	220VAC 50/60Hz
Output ports	20*C13+4*C19
Max power	5KW
Outline size	1217(Adjustable length) x 52 x 44 mm
Installation method	Horizontal/Vertical installation
Safety certification	UL/CE/CCC
Function	Lightning protection, intelligent monitoring, and general circuit breaker are optional

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BRW-DS-T-6393
ECN: CN AC21-387

Rev. 0.2 | **4 / 26**

Cooling channel

Cooling channel closure is composed of skylight, channel door, M-shaped trough, rear enclosure of cabinet, etc.

Power control box

Flip sunroof with a width of 600mm

M-type wire slot

Cabinet rear baffle

Automatic sliding door

Fixed steel skylight with a width of 600mm
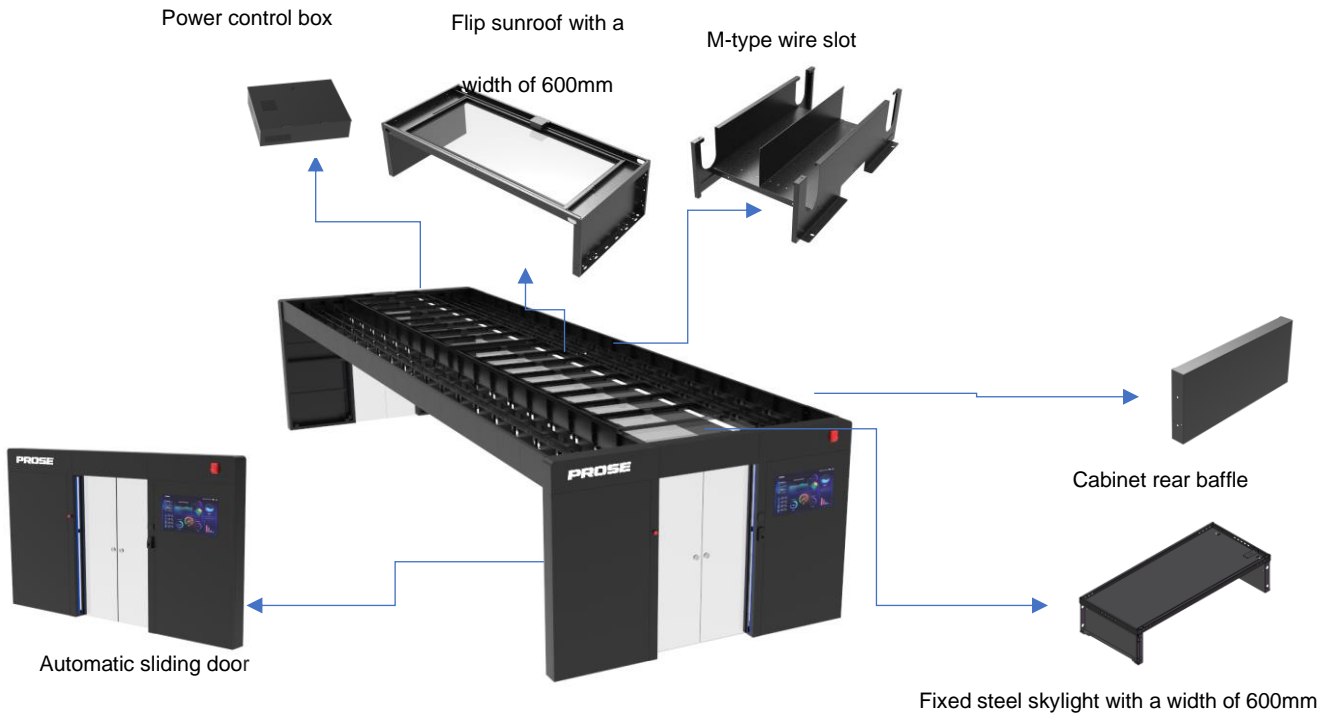
Item	Cooling Channel
Channel width	1200mm
Number of cabinets	20 set Sever cabinet and 6 set 25kw AC
Standard	Compliance with EIA-310-E, IEC297-2, DIN41491; PART1, DIN41494; PART7, GB/T3047.2-92 standard; Compatible with ETSI standard
600mm Flip Sunroof	14 set
600mm Fixed Steel Skylight	2 set
600mm M-type Wire Slot	64 set
Cabinet Rear Baffle	32 pcs
Automatic Sliding Door	2 set
Power Control Box	1 set
Glass Door	10mm

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BRW-DS-T-6393
ECN: CN AC21-387

Rev. 0.2 | **5 / 26**

CM Series Online Modular UPS

In order to meet the development needs of the market, PROSE has introduced CM series modular UPS scheme, which can be flexibly configured between 60 and 600KVA according to customers' needs. The power module adopts the advanced digital control technology and active PFC technology in the industry, which greatly improves the power factor, makes a qualitative leap in power quality, and well responds to the slogan of green energy saving. Accurate and reliable output current sharing performance and advanced intelligent management system will further enhance the reliability, availability and maintainability of the equipment.

Application Scenario

It has been widely used in large data centers, government, military, radio and television, communication, medical treatment, energy, and power industries.

Characteristic

High Efficiency

* High power density, realizing redundant design of 10+2 power modules.

* The industry's first UPS host integrated BMS battery management function, which can monitor the internal parameters of each battery, greatly saving customers' battery construction and operation costs.

* The number of batteries can be adjusted, and the shared battery pack can be supported, so as to realize on-site demand configuration and flexible investment.

* Configure the EPO emergency shutdown button on the panel.

Stable And Reliable

* High-performance intelligent speed regulating fan, redundant fan design, two failed fans still support half-load operation, which does not affect the use of user equipment.

* The module adopts a unique air duct design, which completely isolates the core components such as power semiconductor and control system from the air duct and improves the adaptability of UPS to harsh environment.

* Perfect power distribution scheme, standard manual maintenance switch, optional input switch, output switch and bypass switch.

* Support the battery cold start function, which is convenient for users to directly start the battery pack without commercial power.

* Optional lightning protection components of Class A (60KA), Class B (40KA), Class C (20KA) and Class D (10KA).

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BRW-DS-T-6393
ECN: CN AC21-387

Rev. 0.2 | **6 / 26**

Green Energy Saving

- The input power factor is as high as 0.99; The input harmonic is less than 3%, and the efficiency of the whole machine is over 96%, realizing real green energy saving.

- The 600mm wide by *2000mm high rack can be expanded to 12 power modules, and the system capacity can reach 300kVA, which greatly saves the floor space.

- Electronic load function to reduce energy consumption in the field and aging process.

- Intelligent module sleep mode to ensure energy saving in full load range.

- ECO mode ensures the highest efficiency in a good power grid environment.

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BRW-DS-T-6393
ECN: CN AC21-387

Rev. 0.2 | **7 / 26**

3-Phase Input and 3-Phase Output CM Series UPS 60-200kVA:

Mode		UPS-CM20601-33	UPS-CM21201-33	UPS-CM22001-33
Power capacity		60kVA	120kVA	200kVA
Main input	Wire	3-phase +N wire + ground wire		
	Voltage	380/400/415VAC (line voltage)		
	Frequency	50/60Hz		
	Power factor	0.99		
	Current distortion rate	THDi < 3% (100% linear load)		
	Voltage range	304~485VAC (line voltage) full load, 304~138VAC (line voltage), load from 100% to 40% linear derating		
	Frequency range	40-70Hz		
Battery	Battery voltage	±240VDC(30~50pcs)		
	Charging power	20%* Active Power (Max)		
	Charging voltage accuracy	±1%		
Bypass	Bypass voltage	380/400/415VAC (line voltage)		
	Voltage range	-20%~+15%		
	Frequency range	50/60Hz (rated power), can be set: ±1Hz, ±3Hz, ±5Hz		
Output	Rated output voltage	380/400/415VAC (line voltage)		
	Rated frequency	50/60Hz		
	Power factor	0.9		
	Voltage accuracy	±1.0%		
	Output dynamic response	<5% (20%-80%-20% step load)		
	Dynamic recovery time	20ms (0%-100%-0% step load)		
	Output total harmonic distortion (THDu)	<1% (linear load), <5.5% (nonlinear load)		
	Inverter overload	110%, 1 hour after the bypass; 125%, bypass in 10 minutes; 150%, 1 minute after the bypass p150%, 200ms after the bypass		
	Frequency accuracy	0.1%		
	Tracking range	Configurable, ±0.5Hz-±5Hz, default ±3Hz		
	Tracking rate	Configurable, 0.5Hz/S-3Hz/S, default 0.5Hz/S		
	Peak value ratio	3：1		
	3-phase phase accuracy	120*±0.5*		
System	System efficiency	Normal mode ≥95%, economic mode ≥99%		
	Cell mode efficiency	≥95%		
	Reveal	LCD+LED, Touch screen + control panel		
	IP level	IP20		
	Communication interface	RS232, RS485, dry contact, SNMP card, EPO, generator interface		
	Operating temperature	0-40℃		
	Storage temperature	-25℃~70℃		
	Relative humidity	0-95% (no condensation)		
	Noise (dB)	<66dB		
	Option	SNMP network communication card, lightning protection module, battery temperature compensator, mobile phone SMS alarm, air filter, dual input unit, seismic component		
	Cabinet type	3 Modules	6 Modules	10 Modules
Size (W*D*H) mm	Main machine	600*900*1100	600*900*1600	600*900*2000
	20kVA module	440*590*134		
Weight (kg)	Main machine	171	277	399
	20kVA module	25		

3-Phase Input and 3-Phase Output CM Series UPS 150-300kVA:

Mode		UPS-CM21501-33	UPS-CM22501-33	UPS-CM21801-33	UPS-CM23001-33
Power capacity		150kVA	250kVA	180kVA	300kVA
Main input	Voltage	380/400/415VAC (line voltage)			
	Frequency	50/60Hz			
	Voltage range	304~485VAC (line voltage) full load, 304~138VAC (line voltage), load from 100% to 40% linear derating			
	Frequency range	40-70Hz			
	Power factor	>0.99			
	Current distortion rate	THDi < 3% (100% linear load)			
Battery	Battery voltage	±240VDC(30~50pcs)			
	Charging power	20%* Active Power (Max)			
	Charging voltage accuracy	±1%			
Bypass	Bypass voltage	380/400/415VAC (line voltage)			
	Frequency range	50/60Hz			
	Voltage range	Configurable, default -20%~+15%; Upper limit: +10%, +15%, +20%, +25%; Lower limit: -10%, -15%, -20%, -30%, -40%			
	Frequency range	Set ±1Hz±3Hz±5Hz			
Output	Rated output voltage	380/400/415VAC (line voltage)			
	Rated frequency	50/60Hz			
	Power factor	1			
	Voltage accuracy	±1.0%			
	Output dynamic response	<5% (20%-80%-20% step load)			
	Dynamic recovery time	20ms (0%-100%-0% step load)			
	Output total harmonic distortion (THDu)	<1% (linear load), <5.5% (nonlinear load)			
	Inverter overload	110%, 1 hour after the bypass; 125%, bypass in 10 minutes; 150%, 1 minute after the bypass p150%, 200ms after the bypass			
	Frequency accuracy	0.1%			
	Tracking range	Configurable, ±0.5Hz-±5Hz, default ±3Hz			
	Tracking rate	Configurable, 0.5Hz/S-3Hz/S, default 0.5Hz/S			
	Peak value ratio	3：1			
	3-phase phase accuracy	120*±0.5*			
System	Main mode	≥95%			
	Battery mode	≥95%			
	Reveal	LCD+LED， color touch screen 10.4			
	Communication interface	Standard: RS 232, RS 485, USB, programmable dry contact			
	IP level	IP20			
	Operating temperature	0-40℃			
	Storage temperature	-40℃~70℃			
	Relative humidity	0-95% (no condensation)			
	Noise (dB) (1 m)	65dB@100%load，62dB@45%load			
	Altitude	<1000m, between 1000m and 2000m, the power derating is 1% for every 100 m rise			
	Option	SNMP network communication card, lightning protection module, battery temperature compensator, mobile phone SMS alarm, air filter, and seismic component			
Size (W*D*H) mm		600*1100*1600	600*1100*2000	600*1100*1600	600*1100*2000
		460*790*134(25kW module)		460*790*134(30kW module)	
Weight (kg)		6 modules	10 modules	6 modules	10 modules
		376	572	382	582
		33(25kW module)		34(30kW module)	

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BRW-DS-T-6393
ECN: CN AC21-387
Rev. 0.2 | 9 / 26

3-Phase Input and 3-Phase Output CM Series UPS 80-600kVA:

Mode		UPS-CM20801-33	UPS-CM21001-33	UPS-CM21601-33	UPS-CM22001-33	UPS-CM22401-33	UPS-CM23001-33	UPS-CM24001-33	UPS-CM25001-33	UPS-CM26001-33
Power capacity		80kVA	100kVA	160kVA	200kVA	240kVA	300kVA	400kVA	500kVA	600kVA
Main input	Input mode	3P+N+PE								
	Input voltage	380/400/415VAC (line voltage)								
	Power factor	>0.99								
	Current distortion rate	THDi<3% (100% linear load)								
	Voltage range	304~485VAC (line voltage) full load, 304~138VAC(line voltage), load from 100% to 40% linear derating								
	Frequency range	40-70Hz								
Battery	Battery voltage	±240VDC(30~50pcs)								
	Charging power	20%* Active Power (Max)								
Bypass	Bypass voltage	380/400/415VAC (line voltage)								
	Voltage range	Configurable, default -20%~+15%; Upper limit: +10%, +15%, +20%, +25%; Lower limit: -10%, -15%, -20%, -30%, -40%								
	Frequency range	Set ±1Hz±3Hz±5Hz								
Output	Rated output voltage	380/400/415VAC (line voltage)								
	Rated frequency	50/60Hz								
	Power factor	1								
	Dynamic recovery time	20ms (0%-100%-0% step load)								
	Output total harmonic distortion (THDu)	<1% (linear load), <5.5% (nonlinear load)								
	Inverter overload	110%, 1 hour after the bypass; 125%, bypass in 10 minutes; 150%, 1 minute after the bypass p150%, 200ms after the bypass								
	Frequency accuracy	0.1%								
	Tracking range	Configurable, ±0.5Hz-±5Hz, default ±3Hz								
	Tracking rate	Configurable, 0.5Hz/S-3Hz/S, default 0.5Hz/S								
	Peak value ratio	3：1								
	3-phase phase accuracy	120*±0.5*								
System	Main mode	≥95%								
	Battery mode	≥95%								
	Reveal	LCD+LED, color touch screen								
	EMC	IEC 62040-2; IEC 61000-4-2(ESD)；IEC 61000-4-3(RS)；IEC 61000-4-4(EFT)；IEC 61000-4-5(Surge)								
	IP level	IP20								
	Noise (dB) (1 m)	72dB@100%load，69dB@45%load								
	Operating temperature	0-40℃								
	Relative humidity	0-95% (no condensation)								
	Altitude	<1000m, between 1000m and 2000m, the power derating is 1% for every 100 m rise								
	Option	SNMP card, AS400 card, parallel component, surge protection component, air filter, LBS								
Size (W*D*H) mm		600*980*1150		650*960*1600		650*1095*2000		1050*1100*2000	1300*1114*2000	1300*1114*2000
		510*700*178(40kW module、50kW module)								
Weight (kg)		2 modules	4 modules		6 modules		8 modules		10 modules	12 modules
		210	350		490		700		900	1000
		44(40kW module)、45(50kW module)								

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BRW-DS-T-6393
ECN: CN AC21-387
Rev. 0.2 | **10** /

Lead-acid Battery

PROSE Lead acid battery is floating charge batteries with a designed life of 10 years. It meets IEC standard. Adopt the latest AGM

valve control technology and high purity raw materials, the battery has a reliable standby.

Be applicable to UPS / EPS / Emergency light / Security System / Toy / Medical etc.
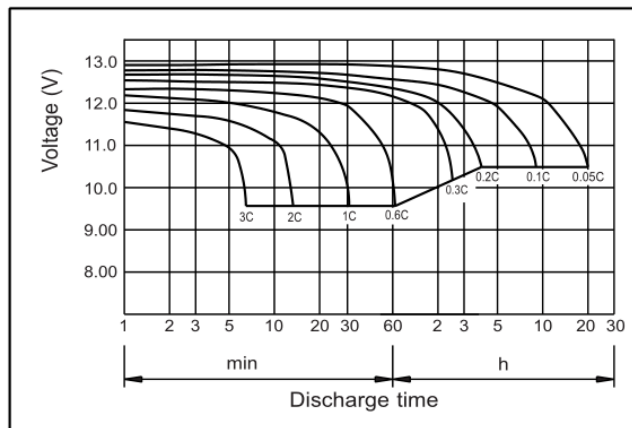
Characteristic

- Long design life:（25℃）：10 years
- Lower self-discharge rate: ≤3%/month
- Good high-rate discharge performance.
- High sealing reaction efficiency: ≥99%.
- Wide range of operating temperatures：-20℃~60℃.
- Structure：Compact design, shorter internal batteries connect the machine (So the internal resistance is low).
- Electrode plates: Paste type.
- Terminal blocks: Two or more types of terminal blocks are provided.
- Diaphragms: Improved AGM diaphragms are used for lower internal resistance and higher assembly pressure to increase cycle life.
- Battery case: Made from high strength ABS (UL94-HB), UL94-V0 is also available.
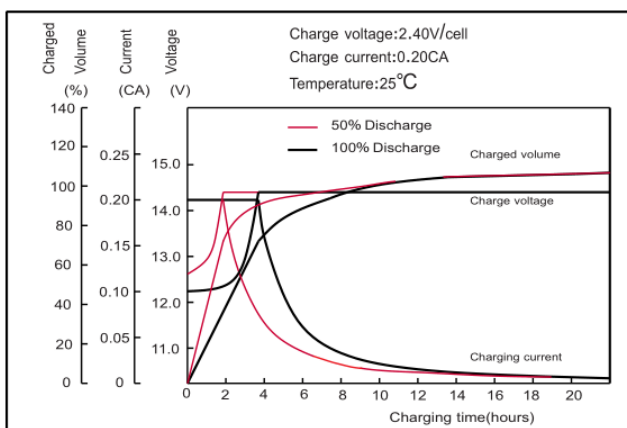- Terminal seal: History of dual seal technology (mechanical + epoxy adhesive).

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ECN: CN AC21-387

Rev. 0.2 | **11** /

Technical Parameters

No.	Rated Voltage	Rated Capacity	Dimensions(mm)				Appr.Weight	Terminal Type
	DC(V)	AH/20HR	L	W	H	Total H	(kg)	
1	12	9	152	65	95	100	2.45	F2
2	12	12	152	100	97	102	3.5	F1/F2
3	12	18	181	77	167	167	5.4	F13
4	12	24	183	78	167	167	7.15	F14
5	12	26	177	167	126	126	9.08	F15
6	12	33	196	131	155	180	9.8	F3
7	12	38	198	166	170	170	13.7	F3
9	12	55	229	138	210	228	15.2	F4
10	12	65	348	168	178	178	21.3	F4
11	12	75	260	168	209	214	22.5	F4
13	12	100	329	172	214	243	30	F4/F8
14	12	120	409	177	207	234	34.8	F9
15	12	150	483	170	240	240	42.4	F4/F10
16	12	200	522	240	218	244	60.6	F5/F11
17	2	100	171	72	205	210	5.6	F7
18	2	200	170	110	330	350	14.3	F7
19	2	300	171	151	330	366	20.3	F7
20	2	400	211	176	329	367	27	F7
21	2	500	241	172	330	365	32.1	F7
22	2	600	301	175	331	366	39.1	F7
23	2	800	410	176	330	365	48.1	F7
24	2	1000	475	175	327	365	64.2	F7
25	2	1200	475	175	327	365	71	F7
26	2	1500	401	351	342	378	101	F7
27	2	2000	491	351	343	383	132	F7
28	2	3000	712	353	341	382	192	F7

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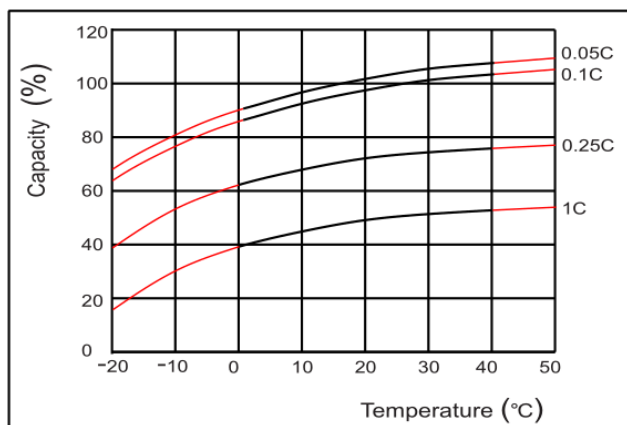**Rev. 0.2** | **12** /

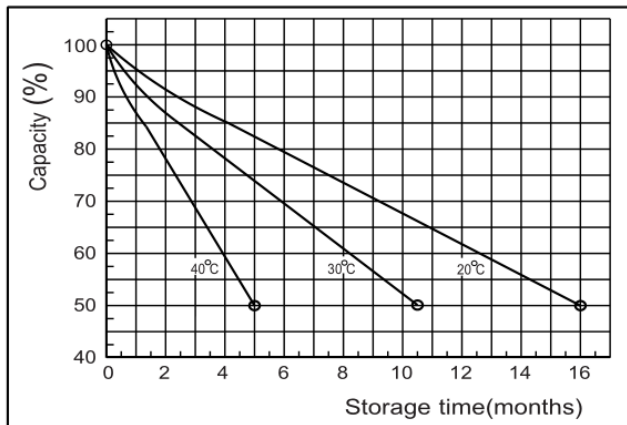## Battery curve specification
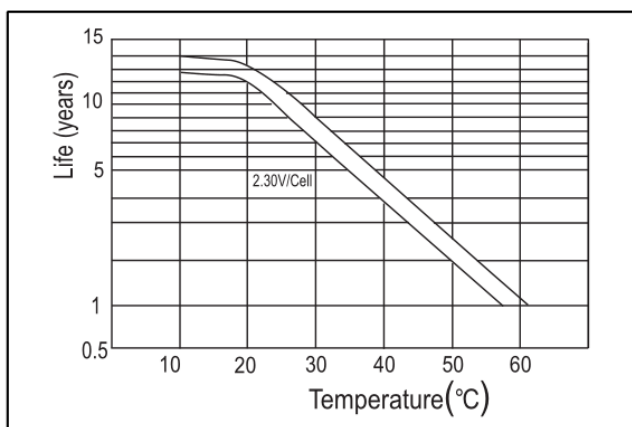
Discharge characteristic(25℃)

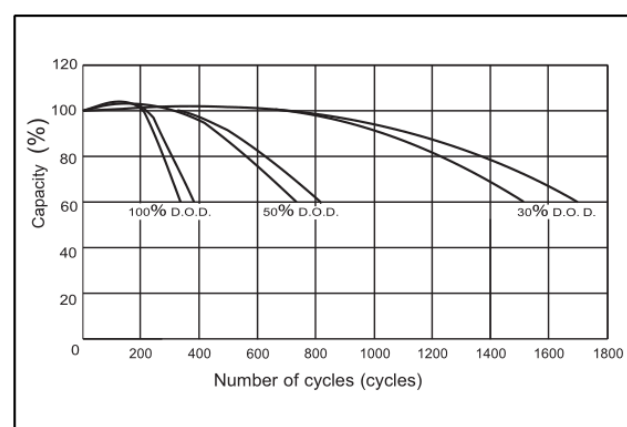Charging characteristic(25℃)

Effect of temperature on capacity

Self-discharge characteristic

Temperature floating life

Cycle life of DO.D(25℃)

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BRW-DS-T-6393
ECN: CN AC21-387

Rev. 0.2 | **13** /

F series room-level air conditioner

F series room-level precision air conditioner, with high efficiency and energy saving, safety and reliability, intelligent management, compact structure and exquisite craftsmanship, fully meets the cooling needs of modern data room.

Data center computer room, communication computer room, computer room, UPS battery room and industrial control room in various industries such as finance, government, enterprise, energy, education, medical care, Internet , etc.

Characteristic

High efficiency and energy saving

- Refrigeration system hierarchical design, intelligent adjustment of cooling capacity
- High COP flexible scroll compressor , high precision electronic expansion valve ;
- Efficient and low noise stepless speed regulation EC fan (sinkable design) ;
- Complete intelligent control system to ensure system dynamic
- The optimal heat exchanger and air duct adopt CFD optimized design, high efficiency and low resistance heat and mass transfer ;

Rich Functions

- Support voltage, frequency detection and over-voltage, over- and under-frequency protection functions;
- With advanced energy efficiency management , the number of technology and group control is up to 32 units, easy to network ;
- Support fan speed detection, fan speed abnormal warning and fan fault detection functions;
- Support optional dual power redundant power distribution scheme and lightning protection function ;
- Support optional rope-type water immersion and point-type water immersion sensor function;

High reliability

- 365 days x 24 hours uninterrupted operation design ;
- PTC electric heating, far infrared humidification, safe and reliable ;
- Complete alarm protection and expert-level self-diagnosis function ;

Intelligent management

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BRW-DS-T-6393
ECN: CN AC21-387

Rev. 0.2 | **14** /

- Human-machine interface, humanized design of 7-inch large color touch LCD screen, one-button operation ;
- Dynamic display of color images of components , temperature and humidity trend curve display ;
- Quick switch between Chinese and English system .

Easy maintenance

- Real full frontal maintenance design, integrated direct connection design of fan and motor, no need to change the belt;
- Far-infrared humidifier, which can realize maintenance-free operation;

Space saving

- Compact and modular design, saving the floor space and maintenance space of the unit to the greatest extent
- It can be easily disassembled, transported and assembled on site according to the module;
- The area/maintenance area of a single module is only 0.9m²/1.8m², and the cooling capacity per unit area can reach up to 70kW/m²

Alarm protection

- Complete automatic protection and alarm function Expert-level fault self-diagnosis function;
- Comprehensive parameter detection and adjustment functions
- Call self-start function, water leakage detection function;
- It has perfect anti-condensation control function and refrigerant leakage alarm function .

Strong adaptability

- Wide range of cooling capacity;
- Meet the operating ambient temperature of -40~55 ℃
- A variety of air supply and return methods , a variety of inlet and outlet pipe methods , and a variety of power supply systems are designed with long connecting pipes and high drop design ;
- Can provide customers with fast and flexible customized solutions .

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BRW-DS-T-6393
ECN: CN AC21-387

Rev. 0.2 | **15** /

Indoor AC technical parameters

Parameter	Model	25KW	30KW	35KW	40KW	45KW	50KW	60KW	70KW	80KW	90KW	100KW
parameter air volume	m³/h	7500	9000	10500	11500	12000	15000	18000	21000	23000	24000	25600
Cooling capacity	kW	26.4	31.5	36.1	38.1	45.7	52.7	62.9	72.3	76.1	91.6	100.2
Sensible cooling capacity	kW	24.5	29.2	33.4	35.2	41.6	48.9	58.2	66.6	70.2	83.4	91.6
Electric heating	kW	6	6	6	6	6	9	9	9	9	9	9
Humidification amount	kg/h	4.5	4.5	4.5	4.5	4.5	6.5	6.5	6.5	6.5	6.5	6.5
Maximum load current FLA	A	32.12	38.20	41.05	41.05	48.97	59.74	71.92	77.60	77.60	93.44	93.44
Unit size	width mm	900	900	900	900	900	1800	1800	1800	1800	1800	1800
	depth mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
	height mm	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980
weight	kg	355	370	375	380	390	665	695	705	715	735	755
The outdoor unit	model	OU-40	OU-50	OU-50	OU-50	OU-70	OU-40	OU-50	OU-50	OU-50	OU-70	OU-70
	quantity	1	1	1	1	1	2	2	2	2	2	2
Dimensions of a single energy-saving module (W*D*H) mm	650*300*950											

Outdoor AC technical parameters

Parameter	Model	OU-40	OU-50	OU-70	OU-80
Number of fans	tower	1	1	2	2
Unit size	width mm	1650	1650	2010	2860
	depth mm	1100	1100	1100	1100
	height mm	1150	1150	1150	1150
full load current	A	2.9	4.7	5.8	5.8
weight	kg	158	168	210	256
noise	db	60	60	62	62

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ECN: CN AC21-387

Rev. 0.2 | 16 /

Inrow air conditioner

G series line-level precision air conditioner is energy efficient, safe and reliable, intelligent management, compact in structure, exquisite in craftsmanship, ultra-high sensible heat ratio, and nearby cooling, which can fully meet the cooling needs of high heat density data room.

Modular data center computer rooms, container data centers, high thermal density data centers, etc. in various industries such as finance, government, enterprises, energy, education, medical care, and the Internet .

Characteristic

High efficiency and energy saving

- High-efficiency inverter compressor, intelligent adjustment of cooling capacity, stepless speed-adjustable fan, precise cooling and energy saving;
- The complete intelligent control system ensures the optimal system dynamics;
- The heat exchanger and air duct adopt CFD optimized design, and the heat and mass transfer with high efficiency and low resistance ;
- Ultra-high sensible heat ratio to avoid repeated loss of humidification and dehumidification.

Rich Functions

- Support voltage, frequency detection and over-voltage, over- and under-frequency protection functions;
- With advanced energy efficiency management , the number of technology and group control is up to 32 units, easy to network ;
- Support fan speed detection, fan speed abnormal warning and fan fault detection functions;
- Support optional dual power redundant power distribution scheme and lightning protection function;
- Support optional rope-type water immersion and point-type water immersion sensor functions;

High reliability

- 365 days x 24 hours uninterrupted operation design ;
- PTC electric heating, far infrared humidification, safe and reliable ;

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ECN: CN AC21-387

Rev. 0.2 | **17** /

- Complete alarm protection and expert-level self-diagnosis function ;

Intelligent management

- Human-machine interface, humanized design of 7-inch large color touch LCD screen, one-button operation ;
- Dynamic display of color images of components , temperature and humidity trend curve display ;
- Quick switch between Chinese and English system .

Easy maintenance

- Real full frontal maintenance design, integrated direct connection design of fan and motor, no need to change the belt;
- Far-infrared humidifier, which can realize maintenance-free operation;
- Fan hot-swappable design, support online maintenance.

Space saving

- Compact and modular design, saving the floor space and maintenance space of the unit to the greatest extent
- It can be easily disassembled, transported and assembled on site according to the module;

Alarm protection

- Complete automatic protection and alarm function Expert-level fault self-diagnosis function;
- Comprehensive parameter detection and adjustment functions
- Call self-start function, water leakage detection function;
- It has perfect anti-condensation control function and refrigerant leakage alarm function.

Strong adaptability

- Wide range of cooling capacity;
- Meet the operating ambient temperature of -40~55 ℃
- Long connecting pipe, high drop design ;
- Can provide customers with fast and flexible customized solutions .

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Rev. 0.2 | **18** /

Indoor AC technical parameters

Parameter	Model	25KW	40KW	50KW
Air volume	m³/h	5000	8500	10500
Cooling capacity	kW	25.8	40	50
Sensible cooling capacity	kW	25.8	40	50
Electric heating	kW	3	6	
Humidification amount	kg/h	1.5	3	3
maximum load current	A	28.2	40	
Unit size	width mm	300	600	600
	depth mm	1100	1100	1200
	height mm	2000	2000	2000
weight	kg	240	330	340
The outdoor unit		OU-40	OU-60	OU-70
Number of outdoor units		1	1	1

Outdoor AC technical parameters

Parameter	Model	OU-40	OU-60	OU-70
Number of fans	tower	1	2	2
Unit size	width mm	1650	2010	2010
	depth mm	1100	1100	1100
	height mm	1150	1150	1150
full load current	A	2.9	5.8	5.8
weight	kg	158	196	210

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Rev. 0.2 | 19 /

Environment Monitoring System

Dynamic Environment Monitoring System monitors and manages the running status of assets and resources in a data center and provides a comprehensive management platform for data centers by collecting, transmitting, and managing devices. IT serves as a bridge between the equipment room infrastructure and IT devices. IT helps O&M personnel manage data centers and improves the reliability of the equipment room and the security of communication devices. In ordinary demand, if only do power, environmental equipment monitoring, we generally call it Dynamic environmental monitoring system.
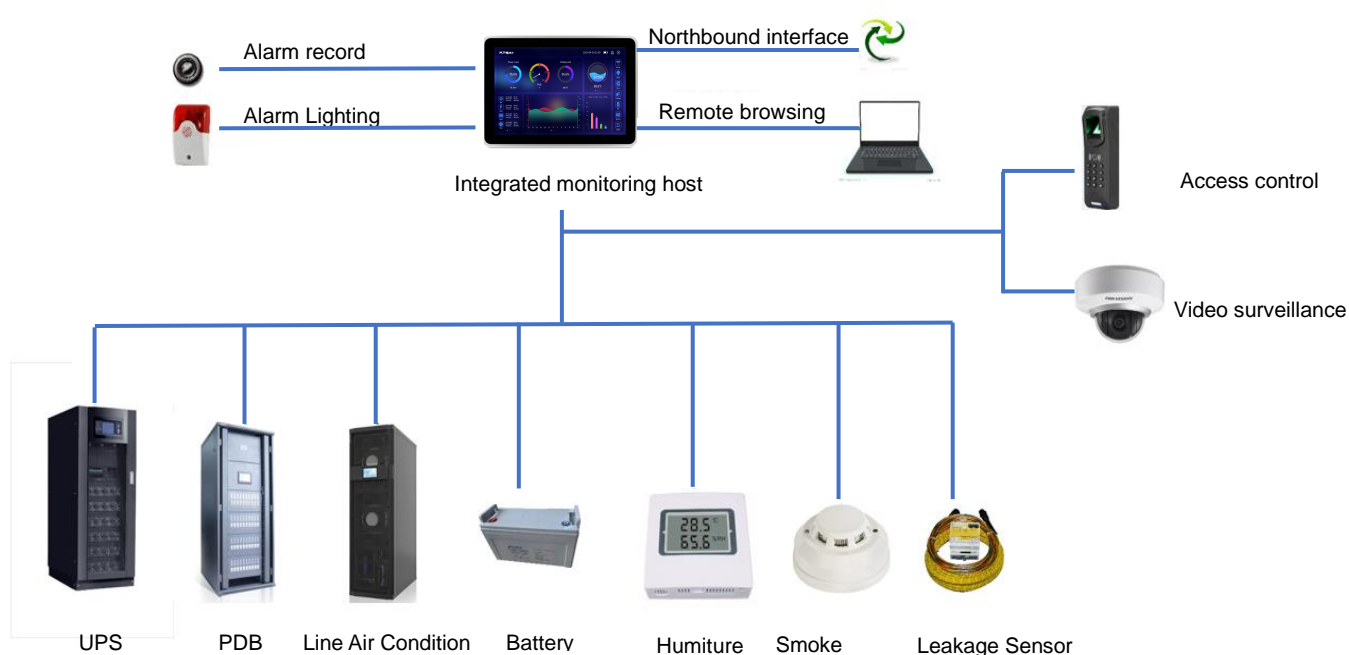
Dynamic environmental monitoring system is a centralized monitoring of power equipment and environmental variables in all kinds of computer rooms.

A set of perfect the distribution of the dynamic environment monitoring system can separate power equipment and computer room environment, computer security monitoring objects such as signal acquisition, real-time monitoring system and equipment running status, security, recording and processing the relevant data, detect the fault in time, and the necessary remote control, remote regulating operation, timely notify ops staff on duty to deal with.

The purpose is to display the equipment room's few people, unattended, and centralized monitoring and maintenance management of power supply and air conditioning and improve the reliability of the power supply system and the security of communication equipment. It provides powerful technical support for the machine room management automation, intelligent operation and scientific decision making.

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Rev. 0.2 | **20** /

Monitoring Object Description

Power load | PUE meter | Air condition load | Humidity &temperature sensor

Smoke sensor
Lamp sensor
Door sensor
Leakages sensor
AFSS sensor
Battery sensor
Cable sensor

Air condition table | Electricity usage diagram | Alarm table

UPS: Collect the main circuit, bypass power quality such as voltage, current, power, frequency, and other information; At the same time, the operating state of the equipment is also monitored, such as UPS on/off state, operation mode and power supply mode, and the working state of its internal key electrical units.

Battery：Collect the voltage, internal resistance, temperature, and other information of a single battery. If the status reaches the warning value, it pushes alarm information in time.

Cabinet：Collect the doors open/close status.

Air Condition：Collect the air supply/return air inlet temperature, compressor working status and temperature and humidity level status.

Humidity &Temperature Sensor：Collect the humidity and temperature at cabinet, the system according to it adjust such as fans status, air conditioning run and stop.

Smoke Sensor：Collect ambient smoke status.

Leakage Sensor：Collect environmental smoke Status. Place the device in a position with water leakage risk. If water leakage occurs, the device detects and generates an alarm.

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Rev. 0.2 | **21** /

Application

Finance, government, enterprise, energy, education, medical, Internet and other industries of the data center room, communication room, computer room, UPS battery room and industrial control room.

Monitoring Host

The integrated monitoring screen is 43 inch capacitive screen, with good man-machine interface and touch performance; A full set of configuration software development tools, a new style interface; Built-in AI/DI/RS232/RS485 port; Fast data acquisition and processing; Cold aisle cabinet side plate embedded installation, beautiful; Support sliding operation, pattern unlock, important data page encryption; A single device can manage multiple intelligent devices and environment such as door status sensor smoke sensor and water leakage.

Item	Technical Specification
CPU	ARM Cortex A9 Quad-core, Max Frequency 1.2GHz
Operating System	Android 5.1
Memory	DDR3L 1GB
Flash Rom	8GB eMMC Flash
Standard Serial Port	3 Ports RS232
Standard Serial Port	7 Ports RS485
Debug Port	1 Port Micro USB
Digital Input Port	8 Ports DI
Digital Output Port	6 Ports DO
Display Port	Reserved 1 Port HDMI
USB Port	3 Ports （1 Port Micro USB Host, 2 Ports USB-A Device）
Touch Panel	Capacitive touch
Resolution	1280 X 800
Output Power Supply	6 Ports 12V/1A
Wireless	Reserved for 3G, 4G and Wi-Fi module expansion slot
Ethernet	1 Ports 10M/100M/1000M
Operating Voltage	12V DC
Max Power	15W
Size	954*539mm(32inch)

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ECN: CN AC21-387

Rev. 0.2 | **22** /

Ordering Information

MOC- XXX XX - XX XX - XX XX - XX XX
     1   2   3   4   5   6   7   8

1.Cabinet Type and Quantity		5. Uninterrupted Power Supply Time and Battery installation	
1:600*1000*2000,42U	01: Single cabinet	0: Without battery	1: battery pack
2: 600*1100*2000,42U	02: Dual cabinet	1: 15 minutes	2: Battery cabinet
3: 600*1200*2000,42U	03: Triplex cabinet	2: 30 minutes	3: Battery rack
4: 600*1000*2200,47U	04: Quadruple cabinet	3: 60 minutes	
5: 600*1100*2200,47U	… ...	4: 120 minutes	
6: 600*1200*2200,47U	48: forty-eight cabinet		
7: 800*1000*2000,42U		**6. Type and quantity of air conditioner**	
8: 800*1100*2000,42U		1: 12.5KW air-cooled air conditioner between trains	0: 0
9: 800*1200*2000,42U		2: 25KW air-cooled air conditioner between trains	1: 1
A: 800*1000*2200,47U		3: 40KW air-cooled air conditioner between trains	2: 2
B: 800*1100*2200,47U		4: 50KW air-cooled air conditioner between trains	3: 3
C: 800*1200*2200,47U		5: Room-level 12.5KW air-cooled air conditioner	4: 4
2. channel type		6: Room-level 20KW air-cooled air conditioner	6: 6
1: Single side cold passage	1: fixed skylights on both sides, inverted skylights in the middle (single opening without automatic resetting), automatic sliding doors on both sides of access doors, wiring slots at the top, and peripheral sealing plates at the top.	7: Room-level 25KW air-cooled air conditioner	
2: Two side cold passage	2: fixed skylight on both sides, inverted skylight in the middle (double-opening without automatic resetting), automatic sliding doors on both sides of access doors, wiring trough at the top, and peripheral sealing plate at the top.	8: Room-level 30KW air-cooled air conditioner	
	3: fixed skylight on both sides, inverted skylight in the middle (single opening without automatic resetting), manual sliding doors on both sides of access doors, wiring trough at the top, and peripheral sealing plate at the top.	9: Room-level 35KW air-cooled air conditioner	
	4: fixed skylight on both sides, inverted skylight in the middle (double-opening without automatic resetting), manual sliding doors on both sides of access doors, wiring trough at the top, and peripheral sealing plate at the top.	A: Room-level 40KW air-cooled air conditioner	
	5: fixed skylights on both sides, inverted skylights in the middle (single-opening without automatic resetting), double-opening revolving doors on both	B: Room-level 50KW air-cooled air conditioner	

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ECN: CN AC21-387

Rev. 0.2 | **23** /

	sides of access doors, wiring ducts at the top, and peripheral sealing plates at the top.		
	6: The fixed skylight on both sides, the inverted skylight in the middle (double-opening without automatic resetting), the double-opening revolving door on both sides of the access door, the top with wiring trough, and the top peripheral sealing plate.	C: Room-level 60KW air-cooled air conditioner	
		D: Room-level 70KW air-cooled air conditioner	
3. Column header tank and Quantity		E: Room-level 80KW air-cooled air conditioner	
1. Ordinary type	0：0 set	F: Room-class 90KW air-cooled air conditioner	
2: Precision column head cabinet	1：1 set	G: Room-class 100KW air-cooled air conditioner	
3: Integrated UPS cabinet	2：2 set		
4. UPS Capacity and Quantity		7. PDU Standard and Quantity per cabinet	
0: Without UPS	0：0 set	A:12 outlet intelligent PDU, 16A, IEC 320 C13	0：0 set
1: modular 30KVA	1：1 set	B: 12 outlets intelligent PDU, 16A, IEC 320 C13 Smart	1：1 set
2: modular 40KVA	2：2 set	C: 24 outlets intelligent PDU, 16A, IEC 320 C13	2：2 set
3: Modular 50KVA	3：3 set	D: 24 outlets intelligent PDU, 16A, IEC 320 C13 Smart	
4: Modular 60KVA	4：4 set	E: 12 outlet PDU, 16A, IEC 320 C13	
5: Modular 80KVA		F: 12 outlet PDU, 16A, IEC 320 C13 Smart	
6: Modular 90KVA		G: 24 outlet PDU, 16A, IEC 320 C13	
7: Modular 100KVA		H: 24 outlet PDU, 16A, IEC 320 C13 Smart	
8: Modular 120KVA		I: 24 outlet PDU, 32A, IEC 320 20*C13+4*C19	
9: Modular 150KVA		J: 24 outlet PDU, 32A, IEC 320 20*C13+4*C19 Smart	
A: modular 200KVA		K: 24 outlet PDU, 16A, IEC 320 20*C13+4*C19	
B: modular 300KVA		L: 24 outlet PDU, 16A, IEC 320 20*C13+4*C19 Smart	
C: high frequency tower 30KVA		M: 24 outlet PDU, 32A, IEC 320 C13	
D: High frequency tower 40KVA		N: 24 outlet PDU, 32A, IEC 320 C13 Smart	
E: high frequency tower 50KVA		O: 24 outlet PDU, 32A, IEC 320 C19	
F: high frequency tower 60KVA		P: 24 outlet PDU, 32A, IEC 320 C19 Smart	

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ECN: CN AC21-387

Rev. 0.2 | 24 /

G: high frequency tower 80KVA		Q: 24 outlet PDU, 32A, IEC 320 18*C13+6*C19	
H: high frequency tower 100KVA		R: 24 outlet PDU, 32A, IEC 320 18*C13+6*C19 Smart	
I: high frequency tower 120KVA		S: 12 outlet PDU, 32A, IEC 320 9*C13+3*C19	
J: high frequency tower 150KVA			
K: high frequency tower 200KVA			
L: high frequency tower 300KVA			
8. Dynamic environment monitoring system and Quantity			
1: No display host, collects UPS, power distribution module, air conditioner, water leakage, temperature and humidity, smoke sensor, access control, intelligent PDU, and northbound interface			0：None
2: No display host, collect UPS, power distribution module, air conditioner, water leakage, temperature and humidity, smoke sensor, and northbound interface			1：1ea
3: Monitors the integrated screen, collecting the UPS, power distribution module, air conditioner, water leakage, temperature and humidity, smoke sensor, access control, intelligent PDU, and northbound interface			2：2ea
4: Monitors the integrated screen, collecting the UPS, power distribution module, air conditioner, water leakage, temperature and humidity, smoke sensor, and northbound interface			

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Rev. 0.2 | **25** /

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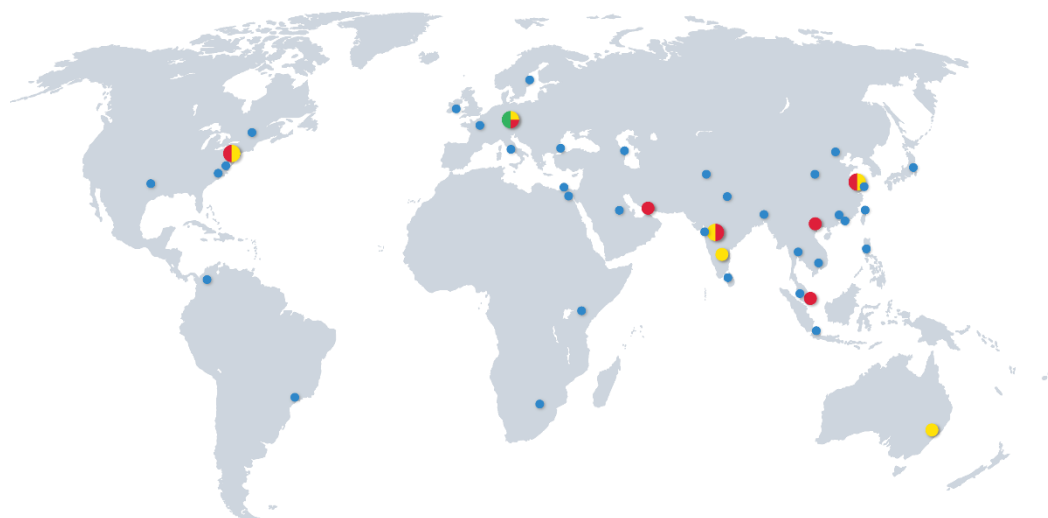
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