

SWITCHBOARD UPS



Three-phase on-line, double conversion UPS for switchboard

Special model of true on-line double conversion system with high efficiency and three-phase Input/Output voltage. The series is High performance and high efficiency with PF 0,9 and PF 1.

Polaris uses power modular technology and it works in redundancy mode N+x.

This model can be used in many industrial applications such as pharmaceutical, food&liquid applications, car production line, wastewater-treatment plant, electron beam technology, steel production, mining&tunneling and for all high temperature, high humidity and dust applications, in special Switchboard cabinet/stainless steel IP54 with air conditioning.

MAIN FEATURES

- On-line double conversion
- Output transfer time is 0ms
- PFC technology
- Full digital control(DSP)
- Output power factor: 0.9 or 1.0
- Input current harmonic: <3%
- Support economic (ECO) operation mode
- Optimization battery group, the quantity of battery
- Wide input voltage range: 208~478Vac
- Wide input frequency range: 40~70Hz
- Cold start
- Communication port: USB, RS232, RS485, Parallel port, Dry contact
- Options: SNMP card/Relay card and MODBUS
- LCD/LED double display
- Intelligent charging management
- EPO function
- Common battery group
- The output can meet 100% unbalanced load
- Inverter stop contact



application example

SwitchBOARD

Model	10KVA(S/H)	15KVA(S/H)	20KVA(S/H)	30KVA(S/H)	40KVA(S/H)	60KVA(S/H)
Input	10KVA/9KW	15KVA/13.5KW	20KVA/18KW	30KVA/27KW	40KVA/36KW	60kVA/54kW
Phase	3 Phase 4 Wires and Ground					
Rated Voltage	380/400/415Vac					
Voltage Range	208~478Vac			138~485Vac		
Frequency Range	45-55Hz at 50Hz/54-66Hz at 60Hz (auto sensing)					40Hz-70Hz
Power Factor	≥0.99					
Current THDi	≤3%(100% nonlinear load)					
Bypass Voltage Range	Max. voltage: 220Vac: +25%(optional +10%,+15%,+20%) 230Vac: +20%(optional +10%,+15%) 240Vac: +15%(optional +10%)					
	Min. voltage: -45%			Min. voltage: -45%		
	(optional -10%, -20%, -30%)			(optional -20%, -30%)		
	Frequency synchronize tracing range: ±10%					
Generator Input	supported					
Output						
Phase	3 Phase 4 Wires and Ground					
Rated Voltage	380/400/415Vac					
Power Factor	0.9					
Voltage Regulation	±1%					
Frequency						
Line Mode	±1%, ±2%, ±4%, ±5%, ±10% of the rated frequency(optional)					synchronize with input; when input frequency >±10% (±1%/±2%/±4%/±5% optional)
Battery Mode	50/60±0.2%Hz					
Crest Factor	3:1					
THD	≤2% with linear load			≤2% with linear load		
	≤5% with non linear load			≤4% with non linear load		

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Battery						
Voltage	Standard unit: ±120Vdc (20pcs 12V9AH); (2x20pcs 12V9AH optional) Long run unit : ±96V/±108V/±120Vdc (16/18/20pcs optional)	Standard unit: ±120Vdc (2x20pcs 12V9AH); Long run unit Optional Voltage: ±96V/±108V/ ±120Vdc (16/18/20pcs optional)		Standard unit: ±120Vdc (3x20pcs 12V9AH); Long run unit Optional Voltage: ±96V/±108V/ ±120Vdc (16/18/20pcs optional)	Long run unit Optional Voltage: ±192V/±204V/ ±216V/±228V/ ±240VDC	Optional Voltage: ±180V/±192V/±204V/ ±216V/±228V/±240/±252/ ±264/±276/±288/±300Vdc (30/32/34/36/38/40/ 42/44/46/48/50pcs optional) 360Vdc~600Vdc (30~50 pcs, 36 pcs define, 36 and 50 pcs no power derating; 32~34 pcs output power factor 0.9;30 pcs output power factor 0.8;)
Charge Current(A)	Standard unit: 1.35A (2.7A optional) Long run unit: Max. current 10A	Standard unit: 2.7A		Standard unit: 4.5A Long run unit: Max.current 10A	Long run unit: Max.current 10A	Max.current 20A
(charge current can be set according to battery capacity installed)		Long run unit: Max. current 10A		Utility to Battery : 0ms; Utility to bypass: 0ms		
Transfer Time	Utility to Battery : 0ms; Utility to bypass: 0ms;					Utility to Battery : 0ms; Utility to bypass: 0ms
Protection						
Overload AC Mode	Load≤110%: last 60min,≤125%: last 10min,≤150%: last 1min, >150% change to bypass immediately					Load≤110%: last 60min,≤125%: last 10min,≤150%: last 1min
Batt. Mode	Load≤110%: last 10min, ≤125%: last 1min, ≤150%: last 5S, >150% shut down UPS immediately			Load≤110%: last 10min, ≤125%: last 1min, ≤150%: last 5S, >150% shut down UPS immediately	Load≤110%: last 60min, ≤125%: last 10min, ≤150%: last 1min, >150%: last 1min, >150%: shut down UPS immediately	
Bypass Mode	Breaker 20A	Breaker 32A	Breaker 40A	Breaker 63A	Breaker 80A	
Short Circuit	120A peak	140A peak		164A Peak		
Overheat	Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately					
Battery Low	Alarm and Switch off					
Self-diagnostics	Upon Power On and Software Control					
EPO (optional)	Shut down UPS immediately					
Battery	Advanced Battery Management					
Noise Suppression	Complies with EN62040-2					
Alarms	Line Failure, Battery Low, Overload, System Fault			Line Failure, Battery Low, Overload, System Fault		overload, utility abnormal, UPS fault, battery low, etc.
Display						
Status LED & LCD	Line Mode, Bypass Mode, Battery Low, Battery Bad, Overload & UPS Fault			Line Mode, Bypass Mode, Battery Low, Battery Bad, Overload & UPS Fault		
Reading On the LCD	Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage & Inner Temperature			Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Batt. Voltage & Inner Temp.		
Comm. Interface	USB, RS485, Parallel (optional), Coupler dry contact, Intelligent slot, SNMP card (optional), Relay card (optional)				USB, RS232, RS485, Parallel port, REPO, LBS, Backfeed, Intelligent slot, SNMP_card (opt.), Relay card (opt.)	
Environment						
Operating Temp. / Storage Temp.	0°C - 40°C / -25°C - 55°C					
Humidity / Altitude	0 - 95% non condensing / < 1500m. When >1500m, lower the rated power for use					
Dimensions(H×W×D)	705x470x283				854x490x281	
Weight (Kg)	47	53	54	60	62	73
Safety Conformance	CE, EN/IEC 62040-2, EN/IEC 62040-1-1			CE, EN/IEC 62040-2, EN/IEC 62040-1-1		IEC/EN62040-1, IEC/EN60950-1, IEC/EN62040-3, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8