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PI500 High-performance sta vector control inverter

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PI500 series high-performance vector control inverter is based on the companys many years of design, production, sales experience,

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Items	Functions	Specifications
Power Input	Rated voltage	AC 3PH 380V(-15%)~440V(+10%)
		AC 1PH 220V(-15%)~240V(+10%)
		AC 3PH 220V(-15%)~240V(+10%)



	Allowing fluctuations	Less than 3% of voltage unbalance rate 3%; Distortion satisfy IEC61800-2 standard		
Control system	Control system	High performance vector control inverter based on DSP		
	Control method	V/F control, vector control W/O PG, vector control W/ PG		
	Automatic torque boost function	Realize low frequency (1Hz) and large output torque control under the V/F control mode.		
	Acceleration/deceleration control	Straight or S-curve mode. Four times available and time range is 0.0 to 6500.0s.		
	V/F curve mode	Linear, square root/m-th power, custom V/F curve	Online	
	Over load capability		G type:rated current 150% - 1 minute, rated current 180% - 2 seconds F type:rated current 120% - 1 minute, rated current 150% - 2 seconds	Consult
			G type:rated current 150% - 1 minute, rated current 180% - 2 seconds F type:rated current 120% - 1 minute, rated current 150% - 2 seconds	Top
	Maximum frequency	1、 Vector control:0 to 300Hz; 2、 V/F control:0 to 3200Hz		
	Carrier Frequency	0.5 to 16kHz; automatically adjust carrier frequency according to the load characteristics.		
	Input frequency resolution	Digital setting: 0.01Hz Analog setting: maximum frequency×0.1%		

	Speed range	1:100 (vector control W/O PG) 1:1000 (vector control W/ PG)	
	Steady-speed precision	Vector control W/O PG: $\leq \pm 0.5\%$ (rated synchronous speed) Vector control W/ PG: $\leq \pm 0.02\%$ (rated synchronous speed)	
	Torque response	$\leq 40\text{ms}$ (vector control W/O PG)	
	Torque boost	Automatic torque boost; manual torque boost(0.1% to 30.0%)	
	DC braking	DC braking frequency: 0.0Hz to max. frequency, braking time: 0.0 to 100.0 seconds, braking current value: 0.0% to 100.0%	
	Jogging control	Jog Frequency Range: 0.00Hz to max. frequency; Jog Ac/deceleration time: 0.0s to 6500.0s	Online
	Multi-speed operation	Achieve up to 16-speed operation through the control terminal	Consult
	Built-in PID	Easy to realize closed-loop control system for the process control.	Top
	Automatic voltage regulation(AVR)	Automatically maintain a constant output voltage when the voltage of electricity grid changes	
	Torque limit and control	"Excavator" feature - torque is automatically limited during the operation to prevent frequent overcurrent trip; the closed-loop vector mode is used to control torque.	
Personalization function	Self-inspection of peripherals after power-on	After powering on, peripheral equipment will perform safety testing, such as ground, short circuit, etc.	
	Common DC bus function	Multiple inverter can use a common	

			probability, and improve whole unit anti-interference capability.		
		Timing control	Timing control function: time setting range(0m to 6500m)		
Running	Input signal	Running method	Keyboard/terminal/communication		
		Frequency setting	10 frequency settings available, including adjustable DC(0 to 10V), adjustable DC(0 to 20mA), panel potentiometer, etc.		
		Start signal	Rotate forward/reverse		
		Multi-speed	At most 16-speed can be set(run by using the multi-function terminals or program)		
		Emergency stop	Interrupt controller output	Online	
		Wobulate run	Process control run	Consult	
		Fault reset	When the protection function is active, you can automatically or manually reset the fault condition	Top	
		PID feedback signal	Including DC(0 to 10V), DC(0 to 20mA)		
		Output Signal	Running status	Motor status display, stop, ac/deceleration, constant speed, program running status.	
			Fault output	Contact capacity :normally closed contact 3A/AC 250V, normally open contact5A/AC 250V, 1A/DC 30V.	
Analog output	Two-way analog output, 16 signals can be selected such as frequency, current, voltage and other, output signal range (0 to 10V / 0 to 20mA).				

			frequency compensation, auto-tuning, PID control	
		DC current braking	Built-in PID regulates braking current to ensure sufficient braking torque under no overcurrent condition.	
		Running command channel	Three channels: operation panel, control terminals and serial communication port. They can be switched through a variety of ways.	
		Frequency source	Total 10 frequency sources: digital, analog voltage, analog current, multi-speed and serial port. They can be switched through a variety of ways.	
		Input terminals	8 digital input terminals, compatible with active PNP or NPN input mode, one of them can be for high-speed pulse input(0 to 100 kHz square wave); 3 analog input terminals for voltage or current input.	Online Consult Top
		Output terminals	2 digital output terminals, one of them can be for high-speed pulse output(0 to 100kHz square wave); one relay output terminal; 2 analog output terminals respectively for optional range (0 to 20mA or 0 to 10V), they can be used to set frequency, output frequency, speed and other physical parameters.	
	Protection function	Inverter protection	Overvoltage protection, undervoltage protection, overcurrent protection, overload protection, overheat protection, overcurrent stall protection, overvoltage stall protection, losing-phase protection	



			protection.	
		IGBT temperature display	Displays current temperature IGBT	
		Inverter fan control	Can be set	
		Instantaneous power-down restart	Less than 15 milliseconds: continuous operation. More than 15 milliseconds: automatic detection of motor speed, instantaneous power-down restart.	
		Speed start tracking method	The inverter automatically tracks motor speed after it starts	
		Parameter protection function	Protect inverter parameters by setting administrator Password and decoding	
Display	LED/OLED display keyboard	Running information	Monitoring objects including: running frequency, set frequency, bus voltage, output voltage, output current, output power, output torque, input terminal status, output terminal status, analog AI1 value, analog AI2 value, motor Actual running speed, PID set value percentage, PID feedback value percentage.	Online Consult Top
		Error message	At most save three error message, and the time, type, voltage, current, frequency and work status can be queried when the failure is occurred.	
	LED display		Display parameters	
	OLED display		Optional, prompts operation content in Chinese/English text.	
	Copy parameter		Can upload and download function code information of frequency converter, rapid replication parameters.	

Communication	RS485	The optional completely isolated RS485 communication module can communicate with the host computer.	
	Environment Product standard	Environment temperature	-10°C to 40°C (temperature at 40 °C to 50°C, please derating for use)
	Storage temperature	-20 °C to 65 °C	
	Environment humidity	Less than 90% R.H, no condensation.	
	Vibration	Below 5.9m/s ² (= 0.6g)	
	Application sites	Indoor where no sunlight or corrosive, explosive gas and water vapor, dust, flammable gas, oil mist, water vapor, drip or salt, etc.	
	Altitude	Below 1000m	
	Pollution degree	2	Online
	Protection level	IP20	
Product standard	Product adopts safety standards.	IEC61800-5-1:2007	Consult
	Product adopts EMC standards.	IEC61800-3:2005	Top
Cooling method		Forced air cooling	