Standard Specification:

	Items	Specifications		
Power	Voltage and frequency	Single-phase 200~240V, 50/60Hz Three-phase 200~240V, 50/60Hz Three-phase 380~415V, 50/60Hz		
	Allowable Fluctuation range	voltage: ±15% frequency: ±5%		
Control	Control system	high performance vector control inverter based on 32 bit DSP		
	Output frequency	G/F/Z/S/T/M type: 0.00~800.0Hz, maximum frequency can be set between 10.00 and 800.0Hz H type: 0.00~2000.0Hz, maximum frequency can be set between 10.00 and 2000.0Hz		
	control method	V/F control	Senseless vector control	Sensor close loop vector control
	Start torque	0.50Hz 180%	0.25Hz 180%	0.00Hz 180%
	speed adjustable range	1: 100	1: 200	1: 2000
	Speed stabilizing precision	±0.5%	±0.2%	±0.02%
	waveform produce methods	Asynchronous space vector PWM, N-class sub-synchronous space vector PWM, two-phase optimization of space vector PWM.		
	Auto torque boost function	Achieve low frequency (1Hz) and high output torque control under V.F control mode.		
	Accelerate /decelerate control	Sub-set S curve acceleration and deceleration mode, maximum acceleration and deceleration time is 3200 days		
	Long running time control	16 segments speed run, maximum running time is 3200 days		
	frequency setting accuracy	Digit: 0.01Hz(below 300Hz), 0.1Hz(above 300Hz); analogue: 1% of maximum frequency		
	frequency accuracy	Speed control tolerance 0.01%(25℃±10℃).		
	V/F curve mode	Linear, 1.2 times the power, 1.7 times the power, 2 times power, user-set 8 V / F Curve.		
	Over load capability	G / S type: 150% rated current -1 minute, rated current 200% -0.1 second; F: rated current 120% -1 minute 150% of rated current -0.1 second; Z / M / T type: rated current 180% -1 minute 250% rated current -0.1 second; H: rated current 250% -1 minute 300% rated current -0.1 second.		
	slip compensation	V / F control can automatically compensate for deterioration.		
Running	Running method	Keyboard/terminal/communication		
	Starting signal	Forward, reverse, jog (parameter control direction), forward jog, and reverse jog.		
	Emergency stop	Interrupt controller output.		
	fault reset	When the protection function is active, you can automatically or manually reset the fault condition.		
	Running status	Motor status display, stop, acceleration and deceleration, constant speed, the program running.		
	DC brake	Built-in PID regulator brake current flow in the premise, however, to ensure adequate braking torque.		
Protection	Inverter protection	Overvoltage protection, under voltage protection, over current protection, overload protection, over-temperature protection, over the loss of speed protection, over-voltage stall protection, phase protection (optional), external fault, communication error, PID feedback signal abnormalities, PG failure		
	IGBT temperature display	Display current IGBT temperature		
	Inverter fan control	The fan starting temperature can be set(optional).		
	Instant power-down re-start	Less than 15 milliseconds: continuous operation. Greater than 15 milliseconds: Automatic detection of motor speed, instantaneous power-down re-start.		
	Speed starting track method	automatically track motor speed when inverter starts		
	Parameter protection function	Protect inverter parameters by setting the password and decoding		
IO	8 way switch input	Can be customized into 47 kinds of functions, to achieve forward, reverse, forward jog, and reverse jog, emergency stop, reset, speed, acceleration speed, run-time switch, and pulse counting.		
	3 way analog inputs	Can be defined as a switch input; To allow for maximum input range-10V ~ +10V, 0 ~ 20mA		
	2 way analog output	Can achieve output range 0 ~ +10V, 0 ~ 20mA		
	Virtual terminal function	Can be set to a virtual terminal, using communication or keyboard IO port, and with the IO port status display.		
Keyboard	Frequency set	In 6 main ways + to 7 kinds of auxiliary to the way of the keyboard, three way analog input, pulse input, digital potentiometers.		
	Keyboard cable	8-core cable, in line with EIA T568A, EIA T568B standards.		
	Double keyboard port	Supports dual-keyboard, synchronous control, independently of each other.		
	Double and multi function keys	MF1, MF2 can be customized as addition and subtraction, forward, reverse, forward jog, and reverse jog, emergency stop, rise and fall, and other 9 kinds of ways.		
	4-parameter storages	Control panel can be realized four groups of inverter parameters of upload, download, with manufacturer password to reset factory setting.		
	Running info	At most display 3 monitoring parameters. Select by A00, A01, A02		
	Fault info	Store 5 groups error messages at most, you can check the type of failure time when failure occurs, set frequency, output frequency, output voltage, output current, running state, running time, IGBT temperature.		
Communication	Double RS485 port	Rs485 port and an optional keyboard completely isolated RS485 communication module.		
	CAN BUS	Can select can-bus module.		
Speed	16-segment speed	At most 16 segments can be set (use multi-functional terminal to shift or program runs).		
	8-segment running time	At most8segment running time can be set(multi-functional terminal can be used to shift)		
	8 segment acceleration speed	At most 8 acceleration speed(can use the multi-functional terminal to switch).		
	Seven-Segment Speed Configuration	At most 7 segment speed configuration can be set (multi-functional terminal can be used to switch).		
PID	PID feedback signal	Six kinds of ways, keyboard, three way analog input, pulse input, digital potentiometers.		
	PID giving signal	Six kinds of ways, keyboard, three ways analog input, pulse input, digital potentiometers.		
Motor	2 groups of motor parameters	With the motor parameters, parameter can be selected, parameter identification automatic storage.		
	3 identification method	Name plate calculation, static measurement, rotation measurements.		
	5 name plate parameters	Rated frequency, rated current, rated voltage, the number of pole pairs, rated speed.		
	5 indentification parameters	N-load current, stator resistance, rotor resistance, stator inductance, mutual inductance.		
Environment	Environment temperature	-10℃ ~ 40℃, 40 ~ 50℃ derating between the use is increased by 1 ℃, rated output current decrease of 1%.		
	Store temperature	-40℃ ~+70℃		
	Environment humidity	5~ 95 %, No condensation		
	Height•vibration	0 ~ 2000 meters, 1000 meters above derating use, increased by 100 m, rated input decreased%		
	Application location	Mounted vertically inside the control cabinet with good ventilation, do not allow the level , or other installation method . The cooling medium is air. Installed in the absence of direct sunlight, N dust, N corrosive and explosive gas, N oil mist, N steam, N drip environment		
	Cooling method	Forced air cooling and natural air cooling.		

Service Network:
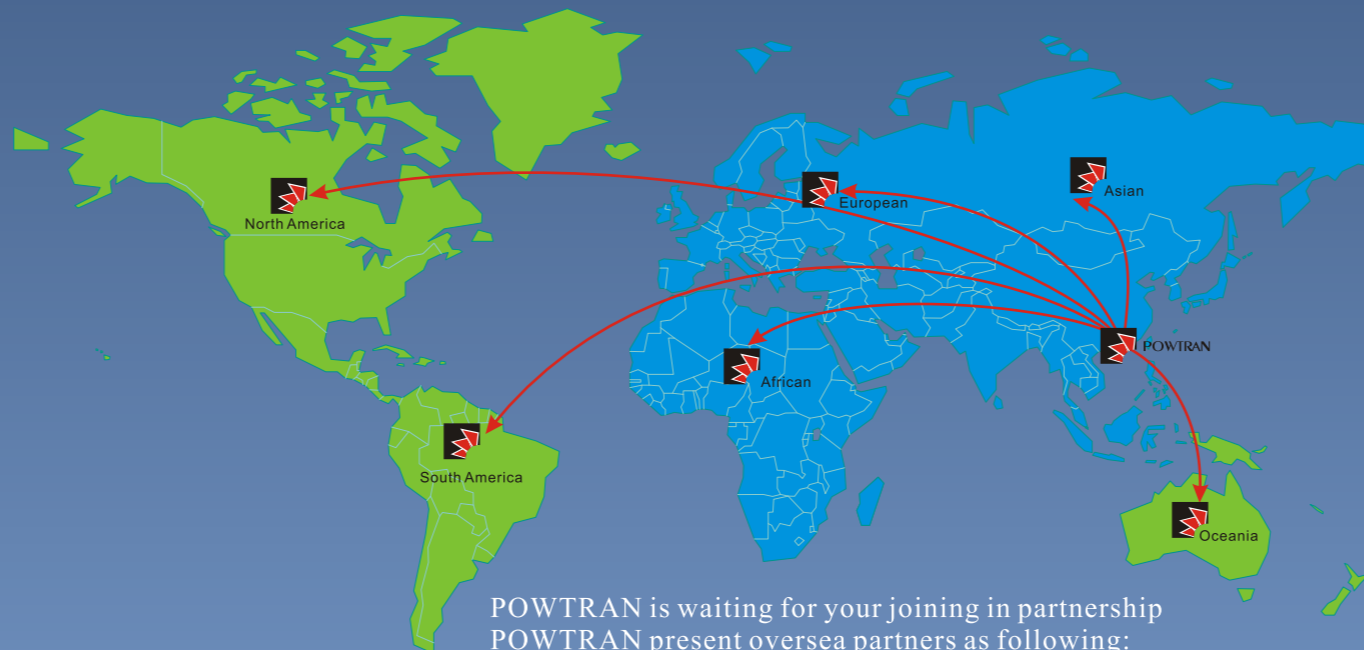
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Powtran technology
--Professional manufacturer of frenquency inverter based on the motor design and manufacture

Contact
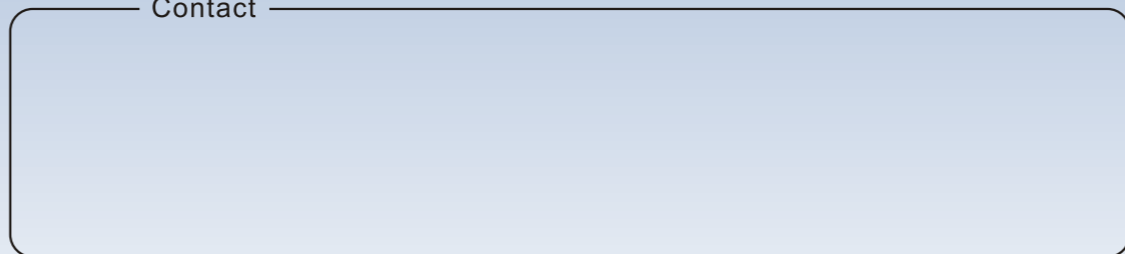
POWTRAN

PI8600 Series

Vector Frequency Inverter

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Vector Frequency Inverter
PI8600 Series

Product orientation:

PI8600 series frequency inverter is produced by Powtran Technology based on PI8100 series high-performance current vector software platform, It is for requirements in application fields with single-phase 220V, especially research a single-phase economic frequency inverter, is a boutique for nowadays small processing manufacture automatic control.

Performance profile:

PI8600 series frequency inverter is a high-quality, multi-functional vector control frequency inverter. By decoupling control of motor magnetic flux current and torque current to achieve quick-response and precise control, can run a wide range of the speed adjustment and torque control at a high accuracy. Brand-new hardware platform, scientific production technology and complete testing equipment, ensure products more stable & reliable in application.

Technical Features:

- Central control module based on DSP(32 bits digital signal processor), realizes high-speed and high-performance control
- Control Mode: Sensorless Vector Control, Sensor Close Loop Vector Control, V/F Control
- Automatic recognize the parameter of the motor, auto-adjust to the best control mode
- Dead zone compensate function and automatic slip compensate, 180% torque output can come out below 0.5Hz frequency
- 8 switch inputs, 3 analog inputs, 2 analog output, 0—10V or 0—20mA from inside the scope of the definition signal
- Support feedback signal 0—10V, 1---5V, 0---20mA, 4---20mA
- Expanding external keyboard, supporting hot-pluggable and can restore or copy 4 groups running parameter programs
- High effective function on default record and recheck, easy trouble-shooting
- Unique EMC design minimizes pollute to electricity resource
- Entire coating can work in various of severe environment
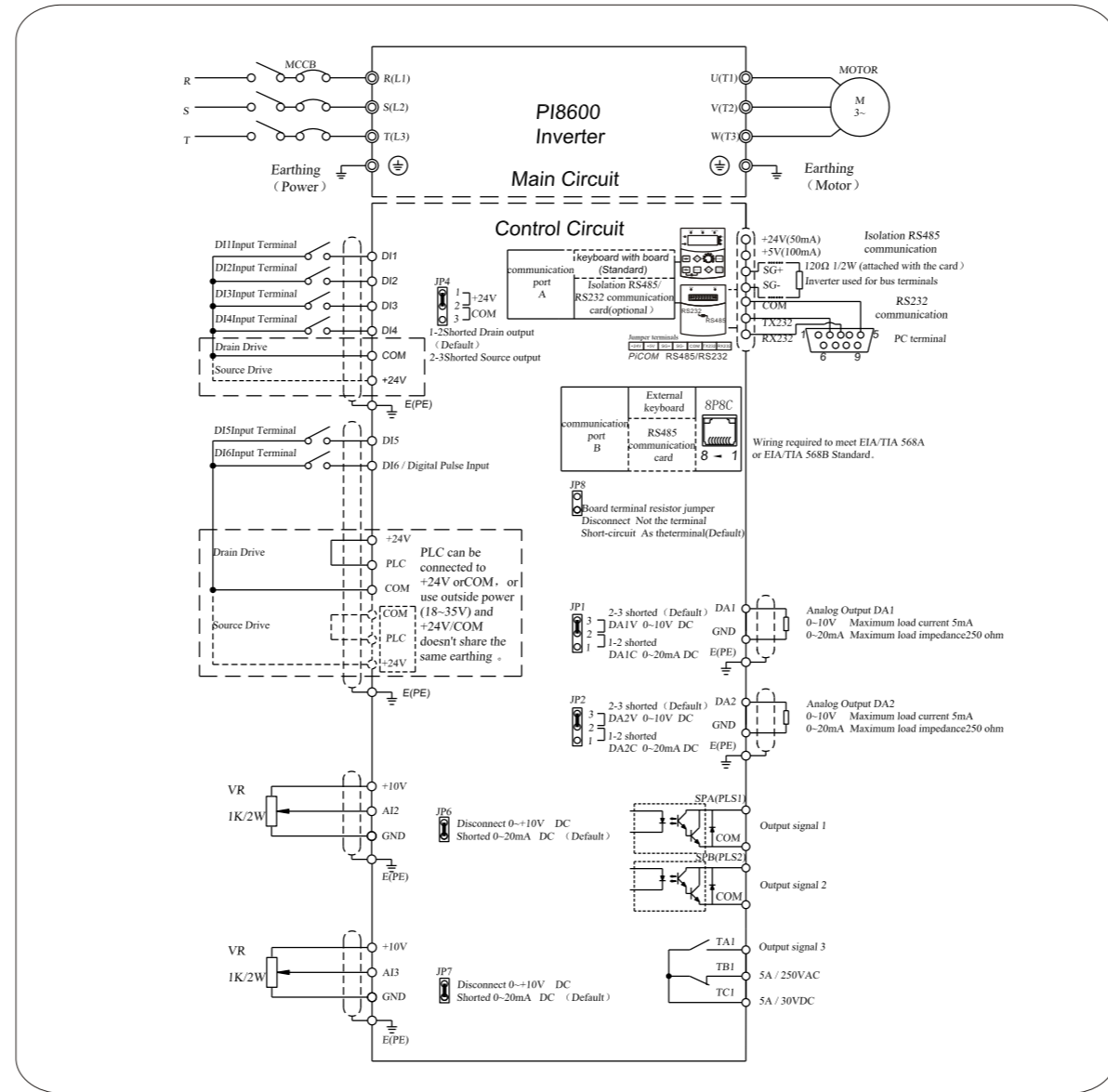- Small body, fashionable appearance

Capacity range:

Power Range: 0.4-1.5kW   Frequency Range: 0.00～800. 00Hz
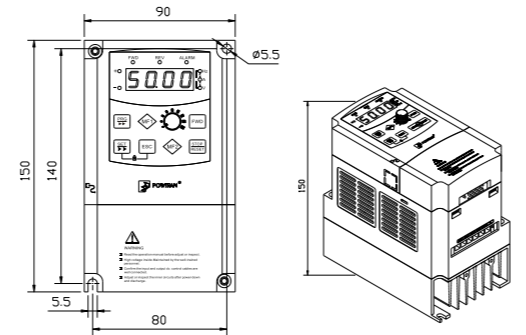Voltage Range: Singe-phase 220V

Application fields:

Medicine, food, printing & dyeing, washing and other industries, mechanical sets: a variety of mechanical sets with single-phase 220V power supply

Circuit diagram:

PI8600 Inverter
Main Circuit
Control Circuit

Specification & Installation Methods:

Model	Power (KW)	Voltage (V)	Current (A)	Shape (mm)			Installation Dimension(mm)		Structure Item	Weight (kg)
				L	W	H	a	b	d	
PI8600 R75G1	0.75	220	4	150	90	150	140	80	Φ5.5	7N1	3.5
PI8600 1R5G1	1.5	220	7							

Frequency inverter must be installed by wall hooking in the indoor room with adequate ventilation with enough space left between it and the adjacent objects or damper (wall) surrounding it, as shown in the above figure

Keyboard Illustration:

JP6C8000 Keyboard

JP6E8000 Keyboard

Keyboard Size

OLED+LED Chinese display
Optional: (for PI8000/8100/8600 series)

Double LED Display
Optional: (for PI8000/8100/8600 series)

The dimension of aperture for installing keyboard in panel : （75.5±0.1）X (122.5±0.1)

JP6D8000 Keyboard rabbet
Optional: (for JP6C8000/JP6E8000 Keyboard)

Non-split keyboard
(for PI8000/8100/8600 series)

external keyboard
(for PI8600 series)