






		inverter, this product has been tested before leaving factory. Otherwise it may cause an accident!
	 Danger	<ul style="list-style-type: none"> • The inverter's cover plate must be closed before power on. Otherwise it may cause an electric shock! • Wiring of all external accessories must comply with the guidance of this manual, please correctly wiring in accordance with the circuit connection methods described in this manual. Otherwise it may cause an accident!
After energizing	 Danger	<ul style="list-style-type: none"> • Do not open cover plate after energizing. Otherwise there is a risk of electric shock! • Do not touch the driver and peripheral circuits with wet hands. Otherwise there is a risk of electric shock! • Do not touch any input and output terminals of the inverter. Otherwise there is a risk of electric shock! • The inverter automatically perform the safety testing for the external strong electrical circuit in the early stages of energizing, therefore never touch the driver terminals(U, V, W) or motor terminals, otherwise there is a risk of electric shock! • If you need to identify the parameters, please pay attention to the danger of injury during motor rotation. Otherwise it may cause an accident! • Please do not change the inverter manufacturer parameters. Otherwise it may cause damage to this unit!
During operation	 Danger	<ul style="list-style-type: none"> • Do not touch the cooling fan and the discharge resistor to feel the temperature. Otherwise it may cause burns! • Non-professional personnel is not allowed to detect signal when operating. Doing so may cause personal injury or damage to this unit!
	 Note	<ul style="list-style-type: none"> • When the inverter is operating, you should avoid that objects fall into this unit. Otherwise cause damage to this unit! • Do not start/stop the driver by switching on/off contactor. Otherwise cause damage to this unit!
When maintaining	 Danger	<ul style="list-style-type: none"> • Do not perform repairs and maintenance for the live electrical equipment. Otherwise there is a risk of electric shock! • The repairs and maintenance task can be performed only when the inverter bus voltage is lower than 36V, Otherwise, the residual charge from capacitor would cause personal injury! • Non-well-trained professional personnel is not allowed to perform repairs and maintenance of inverter. Doing this may cause personal injury or damage to this unit! • After replacing the inverter, parameter settings must be redone, all plugable plugs can be operated only in the case of powering off!

1-3. Precautions

No.	Type	Explanation
1	Motor insulation inspection	Please perform motor insulation inspection for the first time use, re-use after leaving unused for a long time as well as regular check, in order to prevent damage to the inverter because of the motor's winding insulation failure. Wiring between motor and inverter shall be disconnected, it is recommended that the 500V voltage type megameter should be adopted and insulation resistance shall be not less than 5MΩ.
2	Motor thermal protection	If the rated capacity of the selected motor does not match the inverter, especially when the inverter rated power is greater than the motor rated power, be sure to adjust the motor protection parameter values

		inside inverter or install thermal relay in the front of motor for motor protection.
3	Run over power frequency	The inverter output frequency rang is 0Hz to 3200Hz(Max.vector control only supports 300Hz). If the user is required to run at 50Hz or more, please consider the endurance of your mechanical devices.
4	Vibrations of mechanical device	Inverter output frequency may be encountered mechanical resonance point of the load device, you can set jump frequency parameter inside inverter to avoid the case.
5	Motor heat and noise	The inverter output voltage is PWM wave that contains a certain amount of harmonics, so the temperature rise, noise and vibration of motor show a slight higher than frequency power frequency operation.
6	Output side with piezoresistor or capacitor for proving power factor	The inverter output is PWM wave, if the piezoresistor for lightning protection or the capacitor for improving power factor is installed in the output side, which easily cause the inverter instantaneous overcurrent or even cause damage to the inverter. Please do not use.
7	Contact or switch used in the inverter input/output terminals	If contactor is installed between power supply and inverter, the contactor is not allowed to start/stop the inverter. Necessarily need to use the contactor to control the inverter start/stop, the interval should not be less than one hour. Frequent charging and discharging may reduce the service life of the inverter capacitor. If the contactor or switch is equipped between output terminals and motor, the inverter should be turned on/off without output status, otherwise which easily lead to damage to the inverter module.
8	Use other than the rated voltage	PI series inverter is not suitable for use beyond the allowable operating voltage described in this manual, which easily cause damage to the parts inside inverter. If necessary, please use the corresponding transformer to change voltage.
9	Never change 3-phase input to 2-phase input	Never change PI series 3-phase inverter to 2-phase one for application. Otherwise it will lead to malfunction or damage to the inverter.
10	Lightning surge protection	The series inverter is equipped with lightning overcurrent protection device, so it has the ability of self-protection to lightning induction. For the area where lightning is frequent, user should also install the extra protection in the front of the inverter.
11	High altitude and derating application	When the inverter is used in areas over 1000m altitude, it is required to reduce frequency because the thin air will decrease the cooling effect of inverter. Please consult our technician for details on the application.
12	Special use	If the user need to use methods other than the suggested wiring diagram provided in this manual, such as common DC bus, please consult our technician.
13	Precautions for scrap disposal of the inverter	When electrolytic capacitors on the main circuit and printed circuit board as well as plastic parts are burned, it may produce toxic gases. Please disposing as industrial waste.
14	Adaptive motor	1) Standard adaptive motor shall be four-pole asynchronous squirrel-cage induction motor or permanent magnet synchronous motor. Apart from the said motors, please select the inverter according to the motor rated current. 2) The cooling fan and the rotor shaft for non-inverter motor are coaxially connected, the fan cooling effect is reduced when the rotational speed is reduced, therefore, when the motor works in overheating occasions, a strong exhaust fan should be retrofitted or replace non-inverter motor with the inverter motor.

		<p>3) The inverter has built-in the adaptive motor standard parameters, according to the actual situation, please identify motor parameters or accordingly modify the default values to try to meet the actual value, otherwise it will operation affect and protection performance;</p> <p>4) When short-circuit of cable or motor internal will activate the inverter alarm, even bombing. Therefore, firstly perform insulation short-circuit test for the initial installation of the motor and cable, routine maintenance often also need to perform such test. Note that the parts to be tested and the inverter shall be disconnected completely when testing.</p>
15	Others	<p>1) We need to fix cover and lock before power on, so as to avoid the harm to personal safety that is caused by internal injuries of bad capacitors and other components.</p> <p>2) Do not touch internal circuit board and any parts after powering off and within five minutes after keyboard indicator lamp goes out, you must use the instrument to confirm that internal capacitor has been discharged fully, otherwise there is a danger of electric shock.</p> <p>3) Body static electricity will seriously damage the internal MOS field-effect transistors, etc., if there are not anti-static measures, do not touch the printed circuit board and IGBT internal device with hand, otherwise it may cause a malfunction.</p> <p>4) The ground terminal of the inverter (E or ⏏) shall be earthed firmly according to the provisions of the National Electrical Safety and other relevant standards. Do not shut down (power off) by pulling switch, and only cut off the power until the motor stopping operation.</p> <p>5) It is required to add the optional input filter attachment so as to meet CE standards.</p>

1-4. Scope of applications

- ※ This inverter is suitable for three-phase AC asynchronous motor.
- ※ This inverter can only be used in those occasions recognized by this company, an unapproved use may result in fire, electric shock, explosion and other accidents.
- ※ If the inverter is used in such equipment (e.g: equipment for lifting persons, aviation systems, safety equipment, etc.) and its malfunction may result in personal injury or even death. In this case, please consult the manufacturer for your application.

Only the well-trained personnel can be allowed to operate this unit, please carefully read the instructions on safety, installation, operation and maintenance before use.

The safe operation of this unit depends on proper transport, installation, operation and maintenance!