

## POWTRAN Marketing Network

202503EV2.1



## PI550 Series

### High-performance vector control inverter

More valuable intelligent products and solutions ,  
well known brand in the field of electrical drive and control

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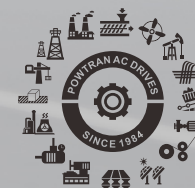
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Due to the continuous upgrading of our products, the content is subject to change without prior notice

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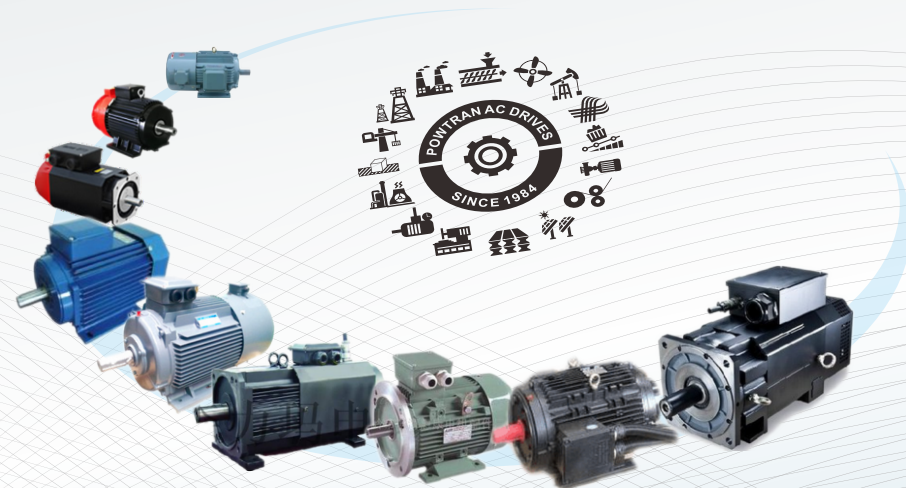




## Integrity Consensus Synergy Sharing

### PI550 Series

PI550 series inverter is a high-performance current vector inverter developed by Powtran technology based on PI500 series. The product adopts DSP as the core control unit, unique vector control algorithm, and true current vector control that strengthen product operation reliability environmental adaptability, case of use and maintainability. The communication function is more perfect and the performance is greatly improved. Products are widely used in metallurgy, petroleum, chemical, steel, textile, electricity, building materials, coal, water supply, photovoltaic, cable, and other industries of various automation equipment drive and control.



### Serving customers

is the only reason for the existence of POWTRAN

## Renewed and upgraded with extraordinary intelligent control!

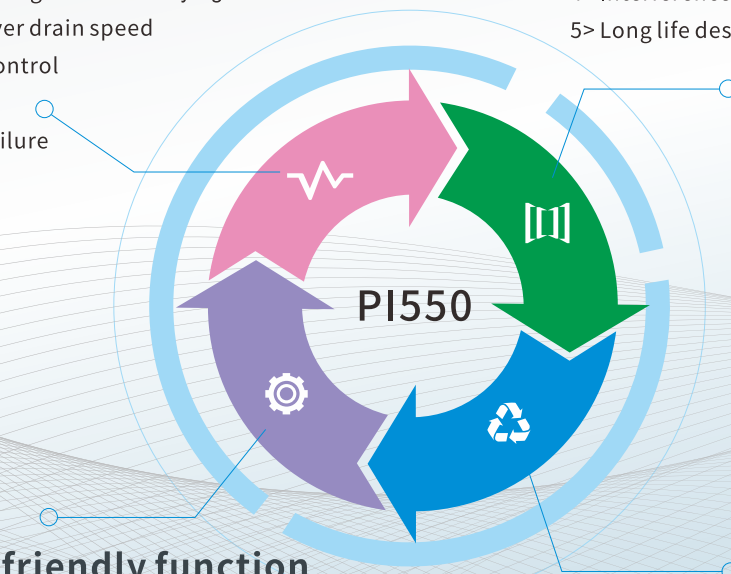
We dedicate ourself to provide global customers with frequency inverters which can be widely used for asynchronous and permanent magnet synchronous motors in different kinds of application.

### Excellent control performance

- 1> Leading motor drive technology
- 2> Excellent control performance
- 3> Perfect communication function
- 4> Real hard speed tracking function: "Flying start"
- 5> High performance over drain speed and over voltage stall control
- 6> Various interfaces
- 7> Momentary power failure restart function

### Reliable structural design

- 1> Heat dissipation: Excellent air duct design
- 2> Excellent thermal management
- 3> Protection: three anti-paint spraying process
- 4> Interference :EMC performance improvement
- 5> Long life design



### Rich and user friendly function

- 1> Wide voltage design to meet international standards
- 2> Self-learning of accurate motor parameters
- 3> Multi-keyboard human-computer interaction
- 4> Support multiple installation methods

### Efficient energy saving performance

- 1> New generation of energy-saving operation
- 2> Meet multiple certifications
- 3> Energy efficiency level improvement





## Company Introduction

POWTRAN Technology as a national high-tech enterprise, set up Wuxi, Guangzhou and more than 30 offices with the center of Shenzhen, Dalian cities and Dongguan and established a worldwide network of R & D, production, logistics and service. Composing the advanced Technology from Japan Toshiba and Taiwan brand, POWTRAN provides a series of energy saving and automatic & drive control products. Such as frequency inverters (including special power supply), soft starters, AC servo drive system, energy saver, vehicle motor drive system. Powtran products are verified by inter-national authoritative organizations and Export to more than 100 Countries, Global cumulative sales of three million units.



## Qualification Certificate



Obtained high-tech enterprise certification six times in 2003, 2009, 2012, 2015, 2018, and 2021



Obtained certification for four versions of ISO9001-1994, 2000, 2008, and 2015 eight times



TUV certification

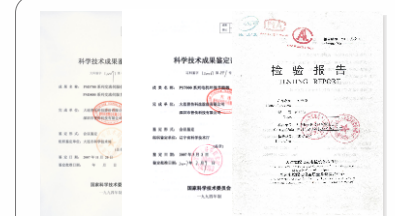
CE certification



Obtained multiple utility model patents, software copyrights, design patents, and well-known trademarks



Won the Vice Chairman Unit of the Inverter Branch of China Electrical Equipment Industry Association for four consecutive years

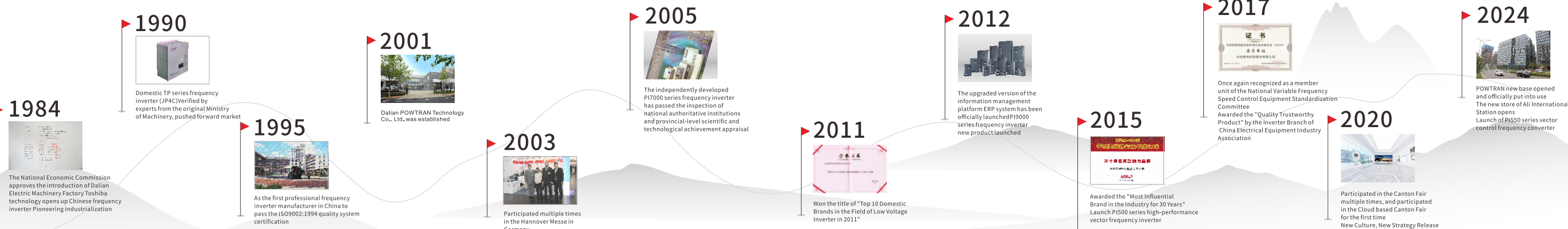


Scientific and technological achievement appraisal and inspection report

## Company History

### Forge ahead

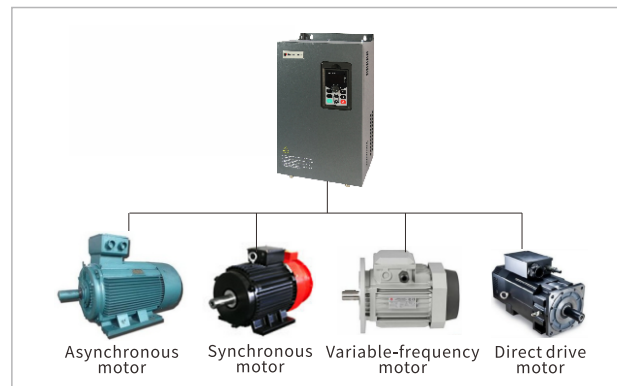
Hundred years motor, forty years inverter





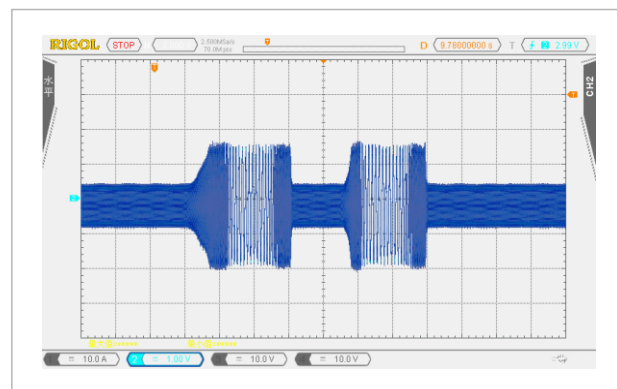
## Technical Features

### Excellent control performance



#### 1> Leading motor drive technology

- ▶ No PG vector control, PG vector control, VF control to meet different load process requirements.
- ▶ Advanced vector control algorithm can realize the current vector control of induction asynchronous motor and permanent magnet synchronous motor with high performance. (PI550E is special for the permanent magnet synchronous motor)

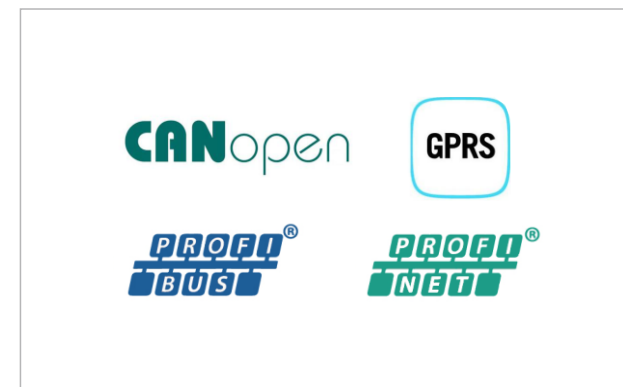


#### 2> Excellent control performance

- ▶ Steady-speed precision:  $\pm 0.5\%$  (no PG vector control),  $\pm 0.02\%$  (PG vector control)
- ▶ Speed range: 1:100 (no PG vector control), 1:1000 (PG vector control)
- ▶ Torque response:  $< 40\text{ms}$  (no PG vector control),  $< 5\text{ms}$  (PG vector control)
- ▶ Heavy load overload capacity: 110% rated stable operation (110% continuously operation) 150% rated load 1Min, 180% rated load 5S
- ▶ Torque characteristics: stable torque output, large low-frequency torque, able to achieve ultra-low speed 0.01Hz stable load operation, torque mode and speed mode can be easily switched. In closed-loop vector mode, the linearity deviation of the torque line is within 3%.
- ▶ With zero servo function, it can reach 0Hz 150% rated torque and can meet the requirements of zero-speed hovering (PI550-L is special for lift)

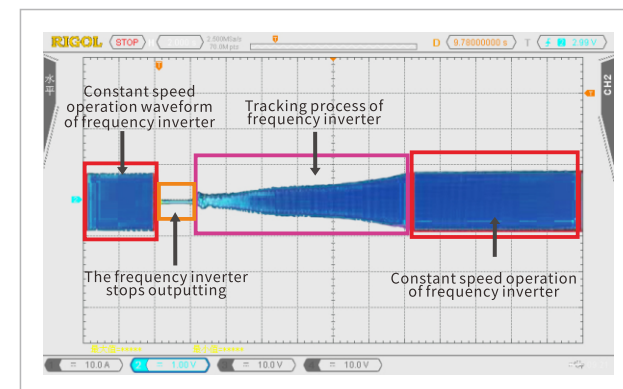
### 3> Perfect communication function designed performance improvement

- ▶ Built-in isolated RS485 communication design, can be extended CANopen, PROFIBUS-DP (supports up to PP05), profinet (using SCI and DSP communication, maximum baud rate: 937.5kHz), etc., to meet the needs of different communication occasions



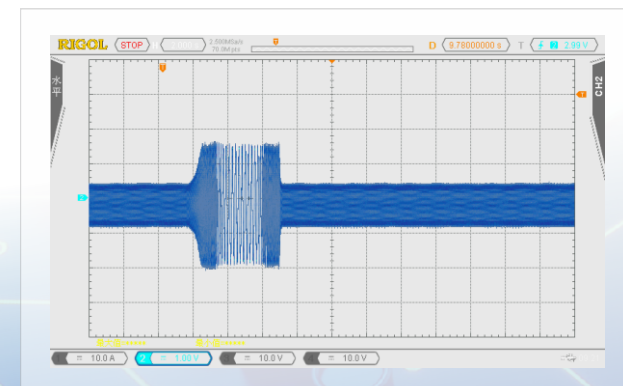
#### 4> Realize the hard speed tracking function: "Flying start"

- ▶ Accurate tracking, stable and reliable



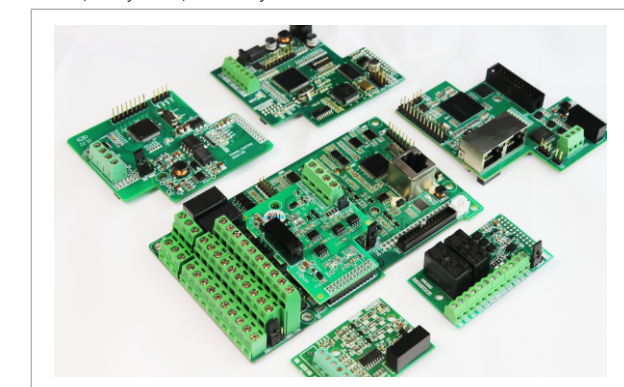
#### 5> High performance over-current stall and over-voltage stall control

- ▶ Can meet the needs of mechanical loads with different characteristics and has a wider range of adaptability



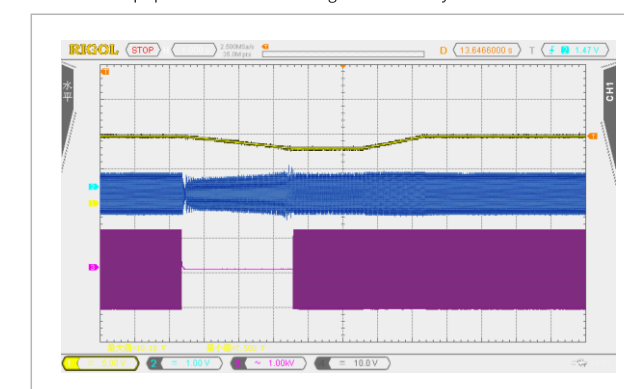
### 6> Supports multiple external expansion cards

- ▶ Include PG cards that meet closed-loop control, communication expansion cards that meet multiple communication protocols, and I/O expansion cards that meet multiple I/O point usage
- ▶ After connect expansion cards, there are total 10 ways of DI, 4 relays, 2 ways of DO, 3 ways of AI, and 2 ways of DA



#### 7> Instant stop and restart function

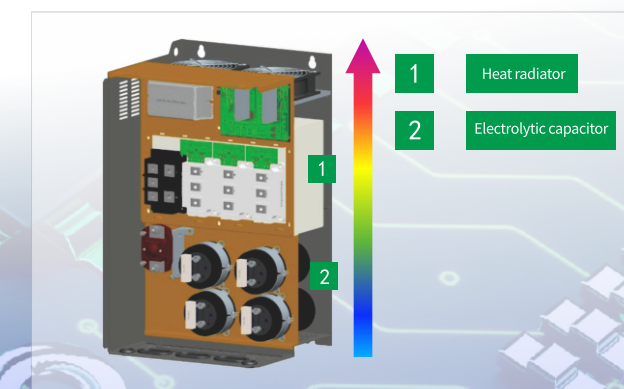
- ▶ When grid instantaneous drops or outages, inverter can absorb feedback energy and keep running without stop in effective time, especially suitable for the equipment which needs higher continuity.



## Reliable structural design

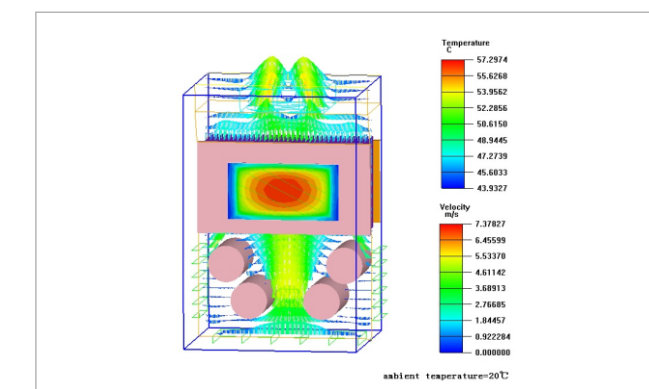
#### 1> Heat dissipation: Excellent air duct design

- ▶ A full series of independent air duct design, heat dissipation duct and electrical and electronic circuit separate, reduce the failure rate of electronic circuit part
- ▶ The fan adopts an easy-to-disassemble design for installation and maintenance.



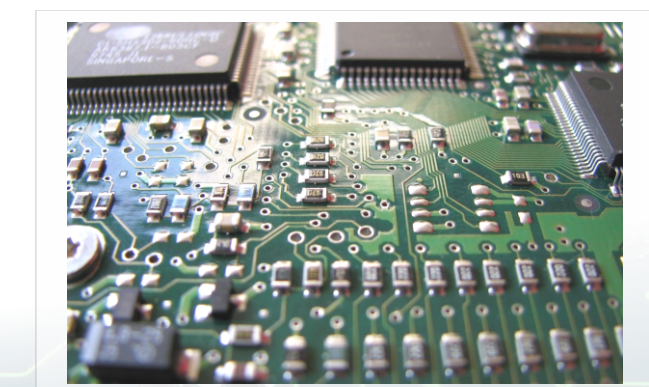
### 2> Excellent thermal management

- ▶ The modular design concept and thermal simulation technology ensure the thermal reliability of the whole machine and the compact structure and small size. The volume is only 70% of the same power of the same brand machine.
- ▶ The rated load temperature rise test and overload temperature rise test of the whole series of inverters are carried out, and the test results meet the thermal design safety standards to ensure the safe and stable operation of the inverters.
- ▶ All series adopt DC fan heat dissipation design, less due to power grid fluctuations caused by fan damage heat dissipation failure.



#### 3> Protection: Three anti-paint spraying process

- ▶ Adopting imported three proof paint, it has moisture-proof, dust-proof, oil proof, and corrosion-resistant properties
- ▶ Using three-dimensional spraying process all-round spraying.

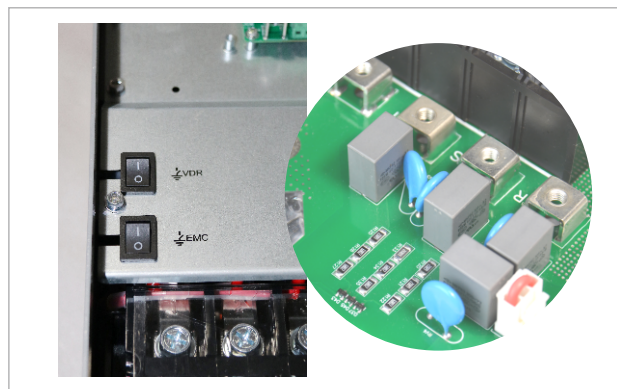




## Technical Features

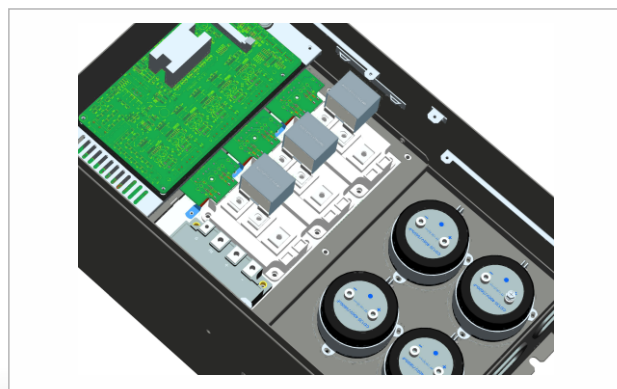
### 4> Interference: EMC Design specifications improved

- ▶ Varistor switches (VDR) and safety capacitor switches (EMC) are suitable for neutral-grounded power grid systems and IT power grid systems.
- ▶ Optional external filter can meet IEC61800-3C2 level requirements
- ▶ The special grounding pile design is used to facilitate grounding and weaken electromagnetic interference, which is more suitable for high-interference occasions.



### 5> Long life design

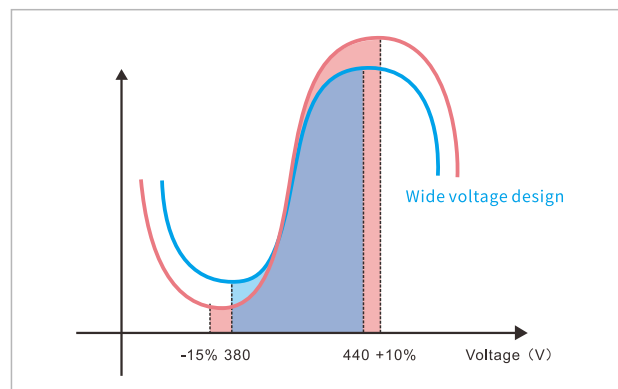
- ▶ Adopting the first class manufacturers of rectifier bridge and IGBT, higher configure, greater device selection, and monitor all the temperature rise of key components and PCB board;
- ▶ Vibration testing to ensure safe transportation design
- ▶ Internal logistic management(bar code technology, RF technology);
- ▶ Sheet Metal design, adopting Cold-rolled steel and galvanized sheet and powder spraying process on the cover



## Rich and easy-to use features

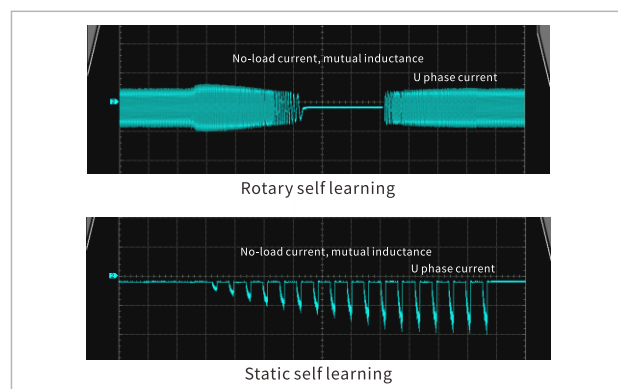
### 1> Meet the international standard of wide voltage input range

- ▶ Wide voltage input range, rated voltage:Ac 3phase 380v(-15%)440v(+10%)



### 2> Precise motor parameter self learning

- ▶ Convenient, simple operation, providing higher control accuracy and response speed
- ▶ Motor parameters can be comprehensive self-study(rotary self learning) or still learning (motor) with the occasion of the load cannot escape, convenient debugging

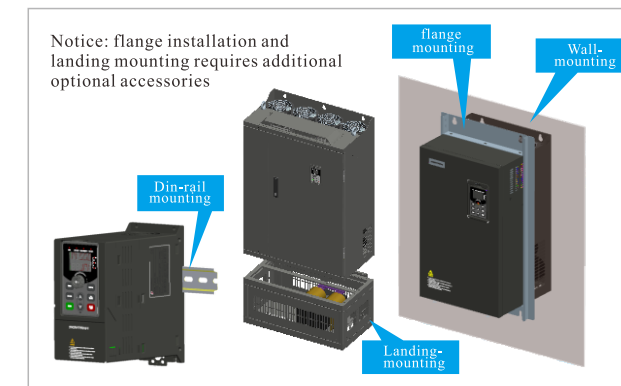


### 3> Multiple keyboard human-computer interaction

- ▶ LED single display, LED dual display, potentiometer, film button, silicone button, LCD display and smart backlight (optional)
- ▶ Film button (suitable for high protection requirements)

### 4> Supporting various kinds of installation ways

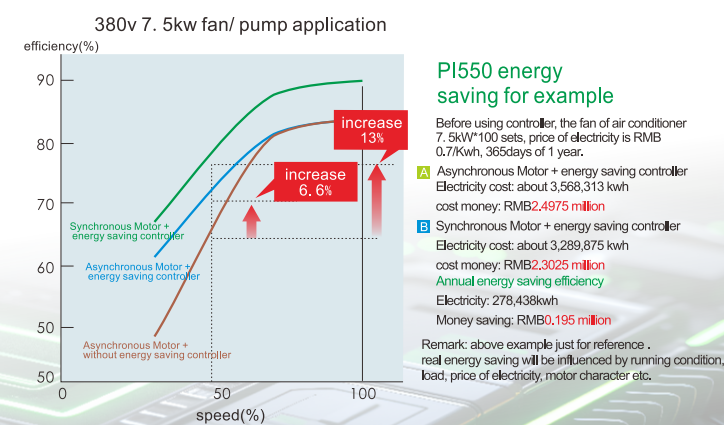
| power(kW) | Installation ways |               |                 |                 |
|-----------|-------------------|---------------|-----------------|-----------------|
|           | Din-rail mounting | Wall-mounting | flange mounting | Landing-mounted |
| 0.75-4.0  | ★                 | ★             |                 |                 |
| 5.5-22    |                   | ★             |                 |                 |
| 30-110    |                   | ★             | ★               |                 |
| 132-200   |                   | ★             | ★               | ★               |
| 220-450   |                   | ★             |                 | ★               |
| 500-800   |                   |               |                 | ★               |



## Efficient energy-saving performance

### 1> New generation energy saving running

- ▶ Adopt the advanced energy control technology to realize the high efficient running of motor;
- ▶ Super energy saving while running with synchronous motor,better than asynchronous motor, realize the super energy saving



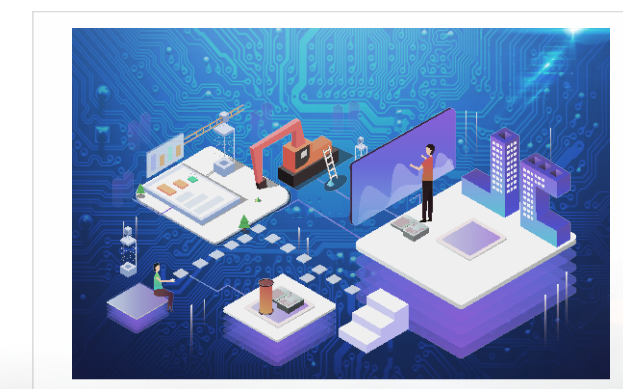
### 2> Meet a number of certification standards

- ▶ Products meet the EU CE certification standard and meet the RoHS directive.
- ▶ Product design meets international standards of EMC and safety regulations.



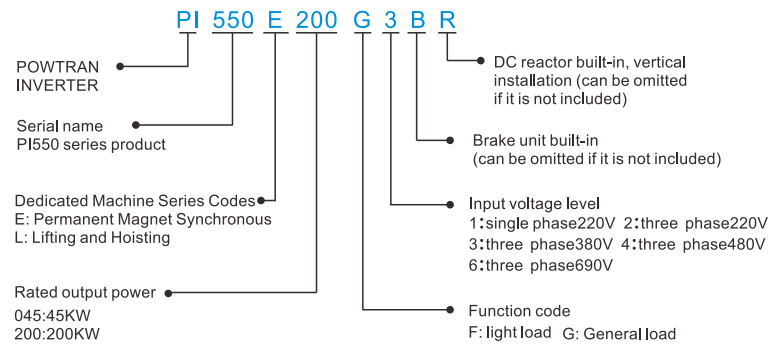
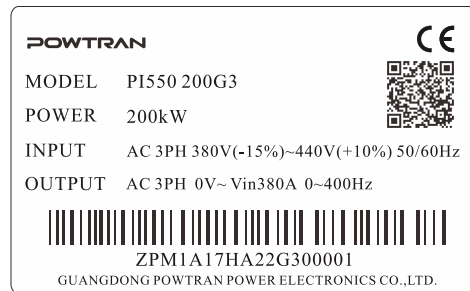
### 3> Energy efficiency level improvement:

- ▶ Meet GB/T 12668.902-2021/IEC61800-9-2:2017 "Electrical Requirements for Speed Control"  
"Part 9-2 Energy Efficiency Indicators for Electrical Transmission Systems and Motor Starters" and NB/T 10463-2020 "Energy Efficiency Limit Values and Energy Efficiency Grades for Variable Frequency Speed Control Equipment" and other standards "



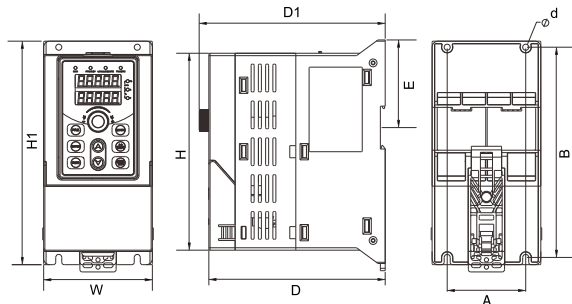


## Nameplate instruction



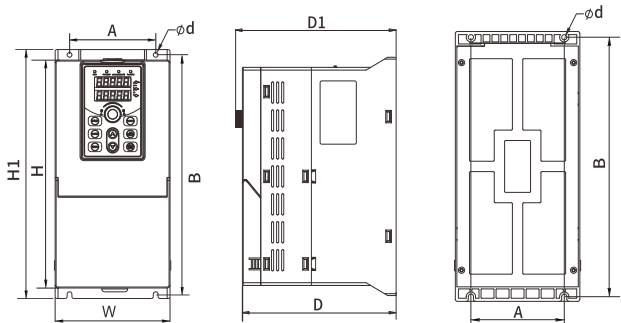
Model Description: PI550 045G3X X=R built in DC reactor (132~400kW) optional X=B built in brake unit(37~75kW) Optional X=BM iron Shell X=N Improved models

## Technical Specification

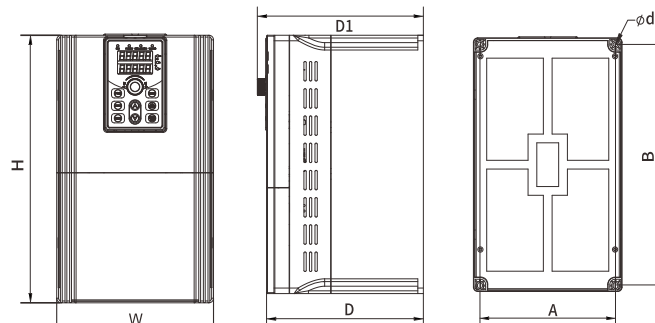


0.75~4kW G3(plastic shell) support Din-rail installation (Base No. A1~A2)

| Base No. | Dimension (mm) |     |     |     |     | Installation (mm) |     |   | Din-Rail mounting (mm) E | N.W (kg) |
|----------|----------------|-----|-----|-----|-----|-------------------|-----|---|--------------------------|----------|
|          | H              | H1  | W   | D   | D1  | A                 | B   | d |                          |          |
| A1       | 163            | 185 | 90  | 146 | 154 | 65                | 174 | 5 | 72.5                     | 1.6      |
| A2       | 163            | 185 | 90  | 166 | 174 | 65                | 174 | 5 | 72.5                     | 1.8      |
| A3       | 238            | 260 | 120 | 182 | 190 | 90                | 250 | 5 | /                        | 2.7      |
| A4       | 290            | /   | 170 | 193 | 201 | 155               | 276 | 5 | /                        | 5.8      |

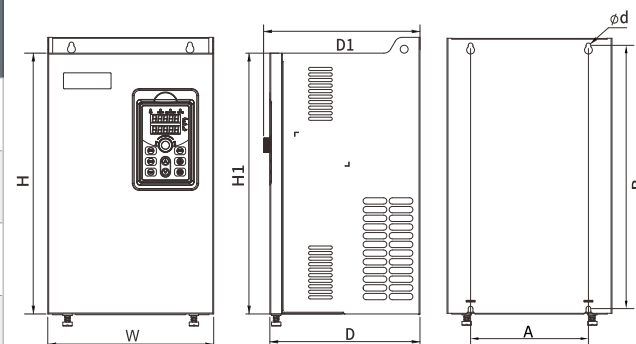


4~11kW G3 (plastic shell) support Wall-mounted installation(Base No. A3)



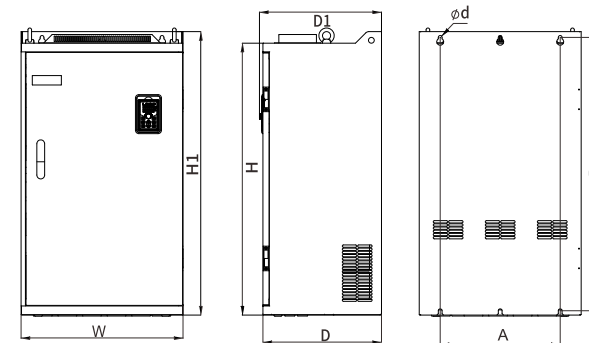
15~22kW G3(plastic shell) support Wall-mounted installation(Base No. A4)

| Base No. | Dimension (mm) |     |     |     |     | Installation (mm) |     |    | N.W (kg) |
|----------|----------------|-----|-----|-----|-----|-------------------|-----|----|----------|
|          | H              | H1  | W   | D   | D1  | A                 | B   | d  |          |
| A5       | 330            | 350 | 210 | 190 | 198 | 150               | 335 | 6  | 9.5      |
| A6       | 380            | 400 | 240 | 215 | 223 | 180               | 385 | 7  | 13       |
| A7       | 380            | 400 | 280 | 215 | 223 | 180               | 385 | 7  | 14       |
| A8       | 500            | 520 | 300 | 275 | 283 | 220               | 500 | 10 | 42       |



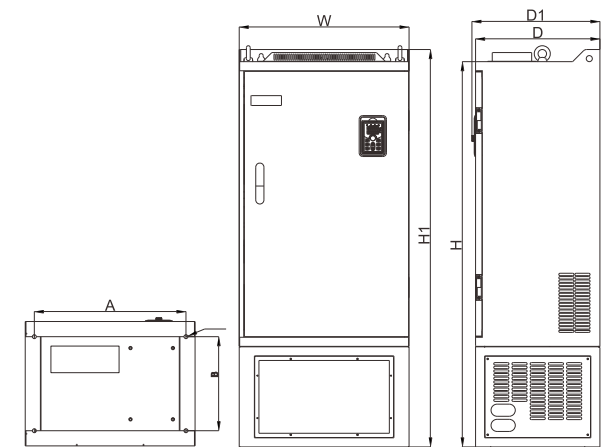
30~220kW G3(iron shell) support Wall-mounted and Flange installation. (Base No. A5~A11, A19)

## Technical Specification



250~450kW G3(iron shell) support Wall-mounted and Floor-mounted installation. (Base No.A12~A13)

| Base No. | Dimension (mm) |     |     |     |     | Installation (mm) |     |    | N.W (kg) |
|----------|----------------|-----|-----|-----|-----|-------------------|-----|----|----------|
|          | H              | H1  | W   | D   | D1  | A                 | B   | d  |          |
| A9       | 550            | 575 | 355 | 320 | 328 | 250               | 555 | 10 | 58       |
| A10      | 695            | 720 | 400 | 360 | 368 | 300               | 700 | 10 | 73       |
| A11      | 790            | 820 | 480 | 390 | 398 | 370               | 800 | 11 | 108      |
| A12      | 940            | 980 | 560 | 410 | 418 | 415               | 945 | 13 | 153      |
| A13      | 940            | 980 | 705 | 410 | 418 | 550               | 945 | 13 | 190      |



132~450kW G3 ( Iron shell) with DC reactor base, support Floor-mounted installation(Base No.A14~A18)

| Base No. | Dimension (mm) |      |      |     |     | Installation (mm) |     |    | N.W (kg) |
|----------|----------------|------|------|-----|-----|-------------------|-----|----|----------|
|          | H              | H1   | W    | D   | D1  | A                 | B   | d  |          |
| A14      | 995            | 1020 | 400  | 340 | 368 | 350               | 270 | 13 | 115      |
| A15      | 1230           | 1260 | 480  | 370 | 398 | 400               | 200 | 13 | 153      |
| A16      | 1419           | 1460 | 560  | 410 | 418 | 500               | 310 | 13 | 205      |
| A17      | 1419           | 1460 | 705  | 410 | 418 | 645               | 310 | 13 | 249.4    |
| A18      | /              | 1700 | 1200 | 600 | 612 | 680               | 550 | 17 | /        |
| A19      | 500            | 520  | 340  | 275 | 283 | 220               | 500 | 10 | 47       |

## Configuration parameter

| Base No. | Inverter model | Output power (kW) | Input current (A) | Output current (A) | Adapted motor power (kW) | brake unit /brake resistor optional(suggest) |          |                                                                                           |                       |                     |                                          |
|----------|----------------|-------------------|-------------------|--------------------|--------------------------|----------------------------------------------|----------|-------------------------------------------------------------------------------------------|-----------------------|---------------------|------------------------------------------|
|          |                |                   |                   |                    |                          | Dynamic braking unit                         |          | Braking resistance selection (100% braking torque 10% braking amount, maximum 10 seconds) |                       |                     |                                          |
|          |                |                   |                   |                    |                          | model                                        | quantity | Resistance value (Ω)                                                                      | Resistance power (kW) | Resistance quantity | Minimum allowable braking resistance (Ω) |
| A1       | PI550 0R4G1    | 0.4               | 5                 | 2.5                | 0.4                      | Built-in as standard                         | /        | 300                                                                                       | 0.07                  | 1                   | 48                                       |
|          | PI550 0R7G1    | 0.75              | 8                 | 4                  | 0.75                     |                                              | /        | 170                                                                                       | 0.12                  | 1                   | 48                                       |
| A2       | PI550 1R5G1    | 1.5               | 14                | 7                  | 1.5                      |                                              | /        | 96                                                                                        | 0.21                  | 1                   | 32                                       |
|          | PI550 2R2G1    | 2.2               | 23                | 10                 | 2.2                      |                                              | /        | 66                                                                                        | 0.31                  | 1                   | 32                                       |
| A3       | PI550 004G1    | 4                 | 35                | 16                 | 4                        |                                              | /        | 36                                                                                        | 0.58                  | 1                   | 16                                       |
| A4       | PI550 5R5G1    | 5.5               | 50                | 25                 | 5.5                      |                                              | /        | 26                                                                                        | 0.8                   | 1                   | 15                                       |
|          | PI550 7R5G1    | 7.5               | 65                | 32                 | 7.5                      |                                              | /        | 19                                                                                        | 1.1                   | 1                   | 10                                       |
| A5       | PI550 011G1    | 11                | 85                | 45                 | 11                       |                                              | /        | 13                                                                                        | 1.6                   | 1                   | 8                                        |
| A6       | PI550 015G1    | 15                | 118               | 60                 | 15                       | PB200-040-2                                  | 1        | 9.6                                                                                       | 2.1                   | 1                   | 9.6                                      |
|          | PI550 018G1    | 18.5              | 145               | 75                 | 18.5                     | PB200-050-2                                  | 1        | 7.8                                                                                       | 2.6                   | 1                   | 7.6                                      |
| A8       | PI550 022G1    | 22                | 178               | 90                 | 22                       | PB200-075-2                                  | 1        | 6.6                                                                                       | 3.1                   | 1                   | 6.5                                      |
|          | PI550 030G1    | 30                | 219               | 110                | 30                       | PB200-100-2                                  | 1        | 5                                                                                         | 4.1                   | 1                   | 4.8                                      |
| A9       | PI550 037G1    | 37                | 302               | 152                | 37                       | PB200-180-2                                  | 1        | 4                                                                                         | 5.1                   | 1                   | 3.9                                      |
|          | PI550 045G1    | 45                | 353               | 176                | 45                       | PB200-180-2                                  | 1        | 3.2                                                                                       | 6.5                   | 1                   | 3.2                                      |
| A11      | PI550 055G1    | 55                | 426               | 210                | 55                       | PB200-180-2                                  | 1        | 2.6                                                                                       | 8                     | 1                   | 2.4                                      |
|          | PI550 075G1    | 75                | 605               | 304                | 75                       | PB200-180-2                                  | 1        | 2.1                                                                                       | 10                    | 1                   | 2.1                                      |



| Base No. | Inverter model | Output power<br>( kW ) | Input current<br>( A ) | Output current<br>( A ) | Adapted motor power<br>( kW ) | brake unit /brake resistor optional(suggest) |          |                                                                                            |                            |                     |                                      |
|----------|----------------|------------------------|------------------------|-------------------------|-------------------------------|----------------------------------------------|----------|--------------------------------------------------------------------------------------------|----------------------------|---------------------|--------------------------------------|
|          |                |                        |                        |                         |                               | Dynamic braking unit                         |          | Braking resistance selection (100% braking torque, 10% braking amount, maximum 10 seconds) |                            |                     |                                      |
|          |                |                        |                        |                         |                               | model                                        | quantity | Resistance value<br>( Ω )                                                                  | Resistance power<br>( kW ) | Resistance quantity | Minimum allowable braking resistance |
| A1       | PI550 0R4G2    | 0. 4                   | 4                      | 2. 5                    | 0. 4                          | Built-in as standard                         | /        | 300                                                                                        | 0. 07                      | 1                   | 48                                   |
|          | PI550 0R7G2    | 0. 75                  | 5                      | 4                       | 0. 75                         |                                              | /        | 170                                                                                        | 0. 12                      | 1                   | 48                                   |
|          | PI550 1R5G2    | 1. 5                   | 8                      | 7                       | 1. 5                          |                                              | /        | 96                                                                                         | 0. 21                      | 1                   | 32                                   |
| A2       | PI550 2R2G2    | 2. 2                   | 11                     | 10                      | 2. 2                          |                                              | /        | 66                                                                                         | 0. 31                      | 1                   | 32                                   |
| A3       | PI550 004G2    | 4                      | 18                     | 16                      | 4                             |                                              | /        | 36                                                                                         | 0. 58                      | 1                   | 16                                   |
|          | PI550 5R5G2    | 5. 5                   | 28                     | 25                      | 5. 5                          |                                              | /        | 26                                                                                         | 0. 8                       | 1                   | 15                                   |
| A4       | PI550 7R5G2    | 7. 5                   | 37                     | 32                      | 7. 5                          |                                              | /        | 19                                                                                         | 1. 1                       | 1                   | 10                                   |
|          | PI550 011G2    | 11                     | 50                     | 45                      | 11                            |                                              | /        | 13                                                                                         | 1. 6                       | 1                   | 8                                    |
| A5       | PI550 015G2    | 15                     | 65                     | 60                      | 15                            | PB200-050-2                                  | 1        | 9. 6                                                                                       | 2. 1                       | 1                   | 9. 6                                 |
| A6       | PI550 018G2    | 18. 5                  | 82                     | 75                      | 18. 5                         |                                              | 1        | 7. 8                                                                                       | 2. 6                       | 1                   | 7. 6                                 |
| A7       | PI550 022G2    | 22                     | 98                     | 90                      | 22                            | PB200-075-2                                  | 1        | 6. 6                                                                                       | 3. 1                       | 1                   | 6. 5                                 |
| A8       | PI550 030G2    | 30                     | 122                    | 110                     | 30                            |                                              | 1        | 5                                                                                          | 4. 1                       | 1                   | 4. 8                                 |
|          | PI550 037G2    | 37                     | 157                    | 152                     | 37                            | PB200-100-2                                  | 1        | 4                                                                                          | 5. 1                       | 1                   | 3. 9                                 |
| A9       | PI550 045G2    | 45                     | 185                    | 176                     | 45                            |                                              | 1        | 3. 2                                                                                       | 6. 5                       | 1                   | 3. 2                                 |
|          | PI550 055G2    | 55                     | 214                    | 210                     | 55                            | PB200-180-2                                  | 1        | 2. 6                                                                                       | 8                          | 1                   | 2. 4                                 |
| A10      | PI550 075G2    | 75                     | 307                    | 304                     | 75                            |                                              | 1        | 2. 1                                                                                       | 10                         | 1                   | 2. 1                                 |
| A11      | PI550 093G2    | 93                     | 383                    | 380                     | 93                            | PB200-250-2                                  | 1        | 1. 6                                                                                       | 13                         | 1                   | 1. 5                                 |
|          | PI550 110G2    | 110                    | 428                    | 426                     | 110                           |                                              | 2        | 2. 6                                                                                       | 8                          | 2                   | 2. 5                                 |
| A12      | PI550 132G2    | 132                    | 467                    | 465                     | 132                           | PB200-180-2                                  | 2        | 2. 2                                                                                       | 10                         | 1                   | 2. 1                                 |
|          | PI550 160G2    | 160                    | 522                    | 520                     | 160                           |                                              | 2        | 1. 8                                                                                       | 12                         | 1                   | 1. 6                                 |

| Base No. | Inverter model          | Output power<br>( kW ) | Input current<br>( A ) | Output current<br>( A ) | Adapted motor power<br>( kW ) | brake unit /brake resistor optional(suggest) |          |                                                                                            |                            |                     |                                      |
|----------|-------------------------|------------------------|------------------------|-------------------------|-------------------------------|----------------------------------------------|----------|--------------------------------------------------------------------------------------------|----------------------------|---------------------|--------------------------------------|
|          |                         |                        |                        |                         |                               | Dynamic braking unit                         |          | Braking resistance selection (100% braking torque, 10% braking amount, maximum 10 seconds) |                            |                     |                                      |
|          |                         |                        |                        |                         |                               | model                                        | quantity | Resistance value<br>( Ω )                                                                  | Resistance power<br>( kW ) | Resistance quantity | Minimum allowable braking resistance |
| A1       | PI550 0R7G3             | 0. 75                  | 4                      | 2. 5                    | 0. 75                         | Built-in as standard                         | /        | 560                                                                                        | 0. 15                      | 1                   | 250                                  |
|          | PI550 1R5G3             | 1. 5                   | 5                      | 3. 8                    | 1. 5                          |                                              | /        | 300                                                                                        | 0. 25                      | 1                   | 170                                  |
|          | PI550 2R2G3             | 2. 2                   | 6                      | 5. 1                    | 2. 2                          |                                              | /        | 215                                                                                        | 0. 4                       | 1                   | 130                                  |
| A2       | PI550 004G3             | 4                      | 11                     | 9                       | 4                             |                                              | /        | 118                                                                                        | 0. 8                       | 1                   | 80                                   |
| A3       | PI550 5R5G3             | 5. 5                   | 15                     | 13                      | 5. 5                          |                                              | /        | 86                                                                                         | 1                          | 1                   | 60                                   |
|          | PI550 7R5G3             | 7. 5                   | 21                     | 17                      | 7. 5                          |                                              | /        | 63                                                                                         | 1. 5                       | 1                   | 47                                   |
|          | PI550 011F3             | 11                     | 26                     | 25                      | 11                            |                                              | /        |                                                                                            |                            |                     |                                      |
|          | PI550 011G3             | 11                     | 26                     | 25                      | 11                            |                                              | /        | 43                                                                                         | 2                          | 1                   | 31                                   |
| A4       | PI550 015F3             | 15                     | 35                     | 32                      | 15                            |                                              | /        | 42                                                                                         | 2                          | 1                   | 31                                   |
|          | PI550 015G3/018F3       | 15/18. 5               | 35/39                  | 32/37                   | 15/18. 5                      |                                              | /        | 31                                                                                         | 2. 3                       | 1                   | 23                                   |
|          | PI550 018G3/022F3       | 18. 5/22               | 39/47                  | 37/45                   | 18. 5/22                      |                                              | /        | 26                                                                                         | 3                          | 1                   | 19                                   |
|          | PI550 022G3             | 22                     | 47                     | 45                      | 22                            |                                              | /        | 22                                                                                         | 3. 5                       | 1                   | 17                                   |
| A5       | PI550 030F3/030G3       | 30                     | 62                     | 60                      | 30                            |                                              | /        | 22                                                                                         | 3. 5                       | 1                   | 17                                   |
| A6       | PI550 037F3             | 37                     | 76                     | 75                      | 37                            | PB200-040-3                                  | 1        | 17                                                                                         | 4                          | 1                   | 16                                   |
|          | PI550 037G3/045F3       | 37/45                  | 76/91                  | 75/90                   | 37/45                         |                                              | 1        | 17                                                                                         | 5                          | 1                   | 16                                   |
|          | PI550 045G3             | 45                     | 91                     | 90                      | 45                            | PB200-050-3                                  | 1        | 14                                                                                         | 6                          | 1                   | 13. 5                                |
| A7       | PI550 055F3             | 55                     | 112                    | 110                     | 55                            |                                              | 1        | 14                                                                                         | 6                          | 1                   | 13. 5                                |
|          | PI550 055G3             | 55/75                  | 112/157                | 110/150                 | 55/75                         | PB200-075-3                                  | 1        | 9                                                                                          | 7                          | 1                   | 8. 5                                 |
| A8       | PI550 075F3/075G3       | 75                     | 157                    | 150                     | 75                            | PB200-100-3                                  | 1        | 7                                                                                          | 9                          | 1                   | 6. 5                                 |
| A9       | PI550 093F3             | 93                     | 180                    | 176                     | 93                            |                                              | 1        | 7                                                                                          | 9                          | 1                   | 6. 5                                 |
|          | PI550 093G3/110F3       | 93/110                 | 180/214                | 176/210                 | 93/110                        |                                              | 1        | 7                                                                                          | 12                         | 1                   | 6. 5                                 |
|          | PI550 110G3/132G3/132F3 | 110/132                | 214/256                | 210/253                 | 110/132                       | PB200-180-3                                  | 1        | 4                                                                                          | 13                         | 1                   | 3. 7                                 |
| A10      | PI550 160F3/160G3       | 160                    | 307                    | 304                     | 160                           |                                              | 1        | 4                                                                                          | 16                         | 1                   | 3. 7                                 |
|          | PI550 187F3             | 187                    | 345                    | 340                     | 187                           |                                              | 1        | 4                                                                                          | 19                         | 1                   | 3. 7                                 |
| A11      | PI550 187G3/200F3       | 187/200                | 345/385                | 340/380                 | 187/200                       | PB200-250-3                                  | 1        | 3                                                                                          | 23                         | 1                   | 2. 7                                 |
|          | PI550 200G3/220F3       | 200/220                | 385/430                | 380/426                 | 200/220                       |                                              | 1        | 3                                                                                          | 24                         | 1                   | 2. 7                                 |
|          | PI550 220G3             | 220                    | 430                    | 426                     | 220                           |                                              | 1        | 3                                                                                          | 26                         | 1                   | 2. 7                                 |
|          | PI550 250F3             | 250                    | 468                    | 465                     | 250                           |                                              | 1        | 3                                                                                          | 26                         | 1                   | 2. 7                                 |
| A12      | PI550 250G3/280F3       | 250/280                | 468/525                | 465/520                 | 250/280                       | PB200-180-3                                  | 2        | 4                                                                                          | 15                         | 2                   | 3. 7                                 |
|          | PI550 280G3             | 280                    | 525                    | 520                     | 280                           |                                              | 2        | 4                                                                                          | 16                         | 2                   | 3. 7                                 |
| A13      | PI550 315F3             | 315                    | 590                    | 585                     | 315                           |                                              | 2        | 4                                                                                          | 16                         | 2                   | 3. 7                                 |
|          | PI550 315G3/355F3       | 315/355                | 590/665                | 585/650                 | 315/355                       |                                              | 2        | 4                                                                                          | 18                         | 2                   | 3. 7                                 |
|          | PI550 355G3/400F3       | 355/400                | 665/785                | 650/725                 | 355/400                       | PB200-250-3                                  | 2        | 3                                                                                          | 20                         | 2                   | 2. 7                                 |
|          | PI550 400G3             | 400                    | 785                    | 725                     | 400                           |                                              | 2        | 3                                                                                          | 23                         | 2                   | 2. 7                                 |

| Base No. | Inverter model       | Output power<br>( kW ) | Input current<br>( A ) | Output current<br>( A ) | Adapted motor power<br>( kW ) | brake unit /brake resistor optional(suggest) |          |                                                                                            |                            |                     |                                               |
|----------|----------------------|------------------------|------------------------|-------------------------|-------------------------------|----------------------------------------------|----------|--------------------------------------------------------------------------------------------|----------------------------|---------------------|-----------------------------------------------|
|          |                      |                        |                        |                         |                               | Dynamic braking unit                         |          | Braking resistance selection (100% braking torque, 10% braking amount, maximum 10 seconds) |                            |                     |                                               |
|          |                      |                        |                        |                         |                               | model                                        | quantity | Resistance value<br>( Ω )                                                                  | Resistance power<br>( kW ) | Resistance quantity | Minimum allowable braking resistance<br>( Ω ) |
| A1       | PI550 0R7G4          | 0. 75                  | 4                      | 2. 5                    | 0. 75                         | Built-in as standard                         | /        | 700                                                                                        | 0. 13                      | 1                   | 96                                            |
|          | PI550 1R5G4          | 1. 5                   | 5                      | 3. 7                    | 1. 5                          |                                              | /        | 400                                                                                        | 0. 23                      | 1                   | 96                                            |
|          | PI550 2R2G4          | 2. 2                   | 6                      | 5                       | 2. 2                          |                                              | /        | 300                                                                                        | 0. 31                      | 1                   | 90                                            |
| A2       | PI550 004G4          | 4                      | 9                      | 8                       | 4                             |                                              | /        | 164                                                                                        | 0. 57                      | 1                   | 80                                            |
| A3       | PI550 5R5G4          | 5. 5                   | 13                     | 11                      | 5. 5                          |                                              | /        | 120                                                                                        | 0. 78                      | 1                   | 70                                            |
|          | PI550 7R5G4          | 7. 5                   | 18                     | 15                      | 7. 5                          |                                              | /        | 88                                                                                         | 1. 1                       | 1                   | 40                                            |
|          | PI550 011F4          | 11                     | 23                     | 22                      | 11                            |                                              | /        |                                                                                            |                            |                     |                                               |
|          | PI550 011G4          | 11                     | 23                     | 22                      | 11                            |                                              | /        | 60                                                                                         | 1. 6                       | 1                   | 32                                            |
| A4       | PI550 015F4          | 15                     | 30                     | 27                      | 15                            |                                              | /        | 60                                                                                         | 1. 6                       | 1                   | 32                                            |
|          | PI550 015G4/018F4    | 15/18. 5               | 30/36                  | 27/34                   | 15/18. 5                      |                                              | /        | 44                                                                                         | 2. 2                       | 1                   | 23                                            |
|          | PI550 018G4/022F4    | 18. 5/22               | 36/42                  | 34/40                   | 18. 5/22                      |                                              | /        | 35                                                                                         | 2. 7                       | 1                   | 23                                            |
|          | PI550 022G4          | 22                     | 42                     | 40                      | 22                            |                                              | /        | 30                                                                                         | 3. 1                       | 1                   | 20                                            |
| A5       | PI550 030F4/030G4    | 30                     | 57                     | 55                      | 30                            |                                              | /        | 30                                                                                         | 3. 1                       | 1                   | 20                                            |
| A6       | PI550 037F4          | 37                     | 67                     | 65                      | 37                            | PB200-040-4                                  | 1        | 22                                                                                         | 4. 2                       | 1                   | 20                                            |
|          | PI550 037G4/045F4    | 37/45                  | 67/82                  | 65/80                   | 37/45                         |                                              | 1        | 17. 5                                                                                      | 5. 4                       | 1                   | 17                                            |
|          | PI550 045G4          | 45                     | 82                     | 80                      | 45                            | PB200-050-4                                  | 1        | 15                                                                                         | 6. 2                       | 1                   | 13. 5                                         |
| A8       | PI550 055F4          | 55                     | 102                    | 100                     | 55                            |                                              | 1        | 15                                                                                         | 6. 2                       | 1                   | 13. 5                                         |
|          | PI550 055G4/75F4     | 55/75                  | 102/137                | 100/130                 | 55/75                         | PB200-075-4                                  | 1        | 12                                                                                         | 7. 8                       | 1                   | 11                                            |
|          | PI550 075G4          | 75                     | 137                    | 130                     | 75                            | PB200-100-4                                  | 1        | 8. 8                                                                                       | 10. 7                      | 1                   | 8. 2                                          |
| A9       | PI550 093F4          | 93                     | 152                    | 147                     | 93                            |                                              | 1        | 8. 8                                                                                       | 10. 7                      | 1                   | 8. 2                                          |
|          | PI550 093G4/110F4    | 93/110                 | 152/185                | 147/180                 | 93/110                        |                                              | 1        | 7                                                                                          | 14                         | 1                   | 6. 5                                          |
|          | PI550 110G4/132G4/F4 | 110/132                | 185/221                | 180/216                 | 110/132                       | PB200-180-4                                  | 1        | 6                                                                                          | 17                         | 1                   | 4. 5                                          |
| A10      | PI550 160F4/160G4    | 160                    | 264                    | 259                     | 160                           |                                              | 1        | 5                                                                                          | 20                         | 1                   | 4. 5                                          |
|          | PI550 187F4          | 187                    | 309                    | 300                     | 187                           |                                              | 1        | 4. 5                                                                                       | 24                         | 1                   | 4. 5                                          |
| A11      | PI550 187G4/200F4    | 187/200                | 309/334                | 300/328                 | 187/200                       | PB200-250-4                                  | 1        | 3. 5                                                                                       | 28                         | 1                   | 3. 2                                          |
|          | PI550 200G4/220F4    | 200/220                | 334/364                | 328/358                 | 200/220                       |                                              | 1        | 3. 3                                                                                       | 30                         | 1                   | 3. 2                                          |
|          | PI550 220G4          | 220                    | 364                    | 358                     | 220                           |                                              | 1        | 3. 2                                                                                       | 33                         | 1                   | 3. 2                                          |
|          | PI550 250F4          | 250                    | 408                    | 400                     | 250                           |                                              | 1        | 3. 2                                                                                       | 33                         | 1                   | 3. 2                                          |
| A12      | PI550 250G4/280F4    | 250/280                | 408/457                | 400/449                 | 250/280                       | PB200-180-4                                  | 2        | 5. 2                                                                                       | 19                         | 2                   | 4. 5                                          |
|          | PI550 280G4          | 280                    | 457                    | 449                     | 280                           |                                              | 2        | 4. 7                                                                                       | 21                         | 2                   | 4. 5                                          |
|          | PI550 315F4          | 315                    | 533                    | 516                     | 315                           |                                              | 2        | 4. 7                                                                                       | 21                         | 2                   | 4. 5                                          |
| A13      | PI550 315G4/355F4    | 315/355                | 533/623                | 516/570                 | 315/355                       |                                              | 2        | 4. 2                                                                                       | 24                         | 2                   | 4. 2                                          |
|          | PI550 355G4/400F4    | 355/400                | 623/707                | 570/650                 | 355/400                       | PB200-250-4                                  | 2        | 3. 7                                                                                       | 27                         | 2                   | 3. 3                                          |
|          | PI550 400G4          | 400                    | 707                    | 650                     | 400                           |                                              | 2        | 3. 3                                                                                       | 30                         | 2                   | 3. 3                                          |



## Configuration parameter

| Base No. | Inverter model    | Output power (kW) | Input current (A) | Output current (A) | Adapted motor power (kW) | brake unit /brake resistor optional(suggest) |          |                                                                                            |                         |                     |                                            |
|----------|-------------------|-------------------|-------------------|--------------------|--------------------------|----------------------------------------------|----------|--------------------------------------------------------------------------------------------|-------------------------|---------------------|--------------------------------------------|
|          |                   |                   |                   |                    |                          | Dynamic braking unit                         |          | Braking resistance selection (100% braking torque, 10% braking amount, maximum 10 seconds) |                         |                     |                                            |
|          |                   |                   |                   |                    |                          | model                                        | quantity | Resistance value ( Ω )                                                                     | Resistance power ( kW ) | Resistance quantity | Minimum allowable braking resistance ( Ω ) |
| A6       | PI550 011G6/015F6 | 11/15             | 15/20             | 12/15              | 11/15                    | PB200-075-6                                  | 1        | 108                                                                                        | 1.65                    | 1                   | 15                                         |
|          | PI550 015G6/018F6 | 15/18.5           | 20/30             | 15/20              | 15/18.5                  |                                              | 1        | 78                                                                                         | 2.3                     | 1                   | 15                                         |
|          | PI550 018G6/022F6 | 18.5/22           | 30/35             | 20/24              | 18.5/22                  |                                              | 1        | 65                                                                                         | 2.7                     | 1                   | 15                                         |
|          | PI550 022G6/030F6 | 22/30             | 35/45             | 24/33              | 22/30                    |                                              | 1        | 53                                                                                         | 3.3                     | 1                   | 15                                         |
|          | PI550 030G6/037F6 | 30/37             | 45/55             | 33/41              | 30/37                    |                                              | 1        | 39                                                                                         | 4.5                     | 1                   | 15                                         |
| A8       | PI550 037G6/045F6 | 37/45             | 55/65             | 41/50              | 37/45                    |                                              | 1        | 32                                                                                         | 5.6                     | 1                   | 15                                         |
|          | PI550 045G6/055F6 | 45/55             | 65/70             | 50/62              | 45/55                    |                                              | 1        | 26                                                                                         | 6.8                     | 1                   | 15                                         |
|          | PI550 055G6/075F6 | 55/75             | 70/90             | 62/85              | 55/75                    |                                              | 1        | 21                                                                                         | 8.3                     | 1                   | 15                                         |
|          | PI550 075G6/093F6 | 75/93             | 90/105            | 85/102             | 75/93                    |                                              | 1        | 15.6                                                                                       | 11.3                    | 1                   | 15                                         |
|          | PI550 093G6       | 93                | 105               | 102                | 93                       | PB200-100-6                                  | 1        | 12.5                                                                                       | 14                      | 1                   | 11                                         |
| A9       | PI550 110F6       | 110               | 130               | 125                | 110                      |                                              | 1        | 12.5                                                                                       | 14                      | 1                   | 11                                         |
|          | PI550 110G6/132F6 | 110/132           | 130/170           | 125/150            | 110/132                  | PB200-180-6                                  | 1        | 10.6                                                                                       | 16.5                    | 1                   | 6                                          |
|          | PI550 132G6/160F6 | 132/160           | 170/200           | 150/175            | 132/160                  |                                              | 1        | 8.8                                                                                        | 20                      | 1                   | 6                                          |
|          | PI550 160G6/187F6 | 160/187           | 200/210           | 175/198            | 160/187                  |                                              | 1        | 7.3                                                                                        | 24                      | 1                   | 6                                          |
| A11      | PI550 187G6/200F6 | 187/200           | 210/235           | 198/215            | 187/200                  |                                              | 1        | 6.2                                                                                        | 28                      | 1                   | 6                                          |
| A12      | PI550 200G6/220F6 | 200/220           | 235/247           | 215/245            | 200/220                  | PB200-250-6                                  | 1        | 5.8                                                                                        | 30                      | 1                   | 4.3                                        |
|          | PI550 220G6/250F6 | 220/250           | 247/265           | 245/260            | 220/250                  |                                              | 1        | 5.3                                                                                        | 33                      | 1                   | 4.3                                        |
| A13      | PI550 250G6/280F6 | 250/280           | 265/305           | 260/299            | 250/280                  |                                              | 1        | 4.7                                                                                        | 38                      | 1                   | 4.3                                        |
|          | PI550 280G6/315F6 | 280/315           | 305/350           | 299/330            | 280/315                  |                                              | 1        | 4.2                                                                                        | 42                      | 1                   | 4.3                                        |
|          | PI550 315G6/355F6 | 315/355           | 350/382           | 330/374            | 315/355                  | PB200-180-6                                  | 2        | 7.4                                                                                        | 24                      | 2                   | 6                                          |
|          | PI550 355G6/400F6 | 355/400           | 382/435           | 374/410            | 355/400                  |                                              | 2        | 6.6                                                                                        | 27                      | 2                   | 6                                          |
|          | PI550 400G6/450F6 | 400/450           | 435/490           | 410/465            | 400/450                  | PB200-250-6                                  | 2        | 5.8                                                                                        | 30                      | 2                   | 4.3                                        |

PI550 series inverters 030G3 and below, as well as special models 37-75G3B, all have built-in braking units. Models 037F3 and above require the use of external braking units. Please select the resistance and power of the braking resistor based on the specific on-site conditions (braking torque requirements and braking utilization requirements).

## Standard specification

| Item                     | Function                                      | Specification                                                                                                                                                       |
|--------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power                    | Rated voltage level                           | AC 1PH 220V(-15%)~240V(+10%)<br>AC 3PH 220V(-15%)~240V(+10%)      AC 3PH 480V(-10%)~480V(+10%)<br>AC 3PH 380V(-15%)~440V(+10%)      AC 3PH 690V(-10%)~690V(+10%)    |
|                          | Input frequency                               | 50Hz/60Hz                                                                                                                                                           |
|                          | Allowable fluctuation                         | Voltage continued volatility $\pm 10\%$ ;    Input frequency volatility: $\pm 5\%$<br>Voltage unbalance rate less than 3% ;    Distortion meet IEC 61800-2 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                                                                                                                      |
|                          | 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                                                                                                   |
|                          | Maximum frequency                             | Vector control:0 to 300Hz 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 $\times 0.1\%$                                                                                            |
|                          | Start torque                                  | G type: 0.5Hz/150%(vector control W/O PG)F type:0.5Hz/100%(vector control W/O PG)                                                                                   |
|                          | 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: 0.0~100.0s                                                 |
|                          | Jogging control                               | Jog Frequency Range: 0.00Hz to max.frequency; Jog Ac/deceleration time: 0.0s-6500.0s                                                                                |
|                          | Multi-speed operation                         | Achieve up to 16-speed operation through the control terminal                                                                                                       |
|                          | Built-in PID                                  | Easy to realize closed-loop control system for the process control.                                                                                                 |
| Personalization function | Self-inspection of peripherals after power-on | After powering on,peripheral equipment will perform safety testing,such as ground, short circuit,etc.                                                               |
|                          | CommonDC bus function                         | Multiple inverters can usea common DC bus.                                                                                                                          |
|                          | Quick current limiting                        | The current limiting algorithm is used to reduce the inverter overcurrent probability, and improve whole unit anti-interference capability.                         |
|                          | Timing control                                | Timing control function: The maximum set time is 6,500 minutes.                                                                                                     |



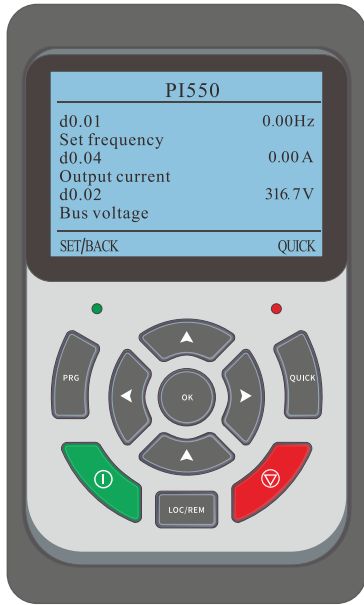
Standard specification

| Item                | Function                         |                     | Specification                                                                                                                                                                                                                                                                                                                  |
|---------------------|----------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Running             | Input signal                     | Running method      | Keyboard/terminal/communication                                                                                                                                                                                                                                                                                                |
|                     |                                  | Frequency setting   | 10 frequency setting modes, including adjustable DC 0~10V/-10~+10V ,adjustable DC 0~20mA , panel potentionmeter                                                                                                                                                                                                                |
|                     |                                  | 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                                                                                                                                                                                                                                                                                                    |
|                     |                                  | Wobblulate run      | Process control run                                                                                                                                                                                                                                                                                                            |
|                     |                                  | Fault reset         | When the protection function is active,you can automatically or manually reset the fault condition.                                                                                                                                                                                                                            |
|                     |                                  | PID feedback signal | In cluding 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:normal-closed contact 3A/AC 250V;normal-opened contact 5A/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).                                                                                                                                                                                        |
|                     |                                  | Output signal       | At most 4-way output,there are 40 signals each way                                                                                                                                                                                                                                                                             |
|                     | Frequency converter efficiency   |                     | >96%                                                                                                                                                                                                                                                                                                                           |
|                     | Run function                     |                     | Limit frequency,jump frequency,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 beswitchedthrough a variety of ways.                                                                                                                                                                                                  |
|                     | Frequency source                 |                     | There are 10 frequency sources: digital, analog voltage , analog current , multi-speed and serial port. They can be switched through a variety of ways.                                                                                                                                                                        |
|                     | Input terminals                  |                     | Eight digital input terminals, compatible with active PNP or NPN input mode, one of them can be for high-speedpulse input (0~100Hz square wave); three analog output terminals, Al1 and Al2 can choose 0~10V or 0~20mA input, Al3 voltage -10~+10V input.                                                                      |
|                     | Output terminals                 |                     | 2 digital output terminals, one of them can be for high-speed pulse output (0~100kHz square wave); One relay output terminal; Two analog output terminals, respectively for optional range (0~20mA or 0~10V),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 (optional), external fault,communication error.PID feedback signal abnormalities,PG failure and short circuit to ground 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 the motor speed when it starts                                                                                                                                                                                                                                                               |
| Display             | LED/LCD display keyboard         | Running information | Monitoring objects include: operating frequency, set frequency, actual motor current , DC bus voltage , output current, output power, output torque, input terminal state output terminal state, analog Al value , analog Al2 value , actual motor running speed, PID set value percentage, PID feedback value percentage, etc |
|                     |                                  | Error message       | Up to 3 error messages can be saved to query the fault type, voltage, current, frequency, and working status at the time of fault occurrence                                                                                                                                                                                   |
|                     | LCD display                      |                     | Display parameters                                                                                                                                                                                                                                                                                                             |
|                     | LCD display                      |                     | Optional,prompts operation content in Chinese/English text.                                                                                                                                                                                                                                                                    |
|                     | Parameters copy                  |                     | Lock part or all of keys,define the function scope of some keys to prevent misuse                                                                                                                                                                                                                                              |
|                     | Key lock and function selection  |                     | Realize partial or full locking of keys, define the scope of action of some keys, to prevent misuse                                                                                                                                                                                                                            |
|                     |                                  |                     |                                                                                                                                                                                                                                                                                                                                |
| Communication       | RS485                            |                     | Built-in isolation 485                                                                                                                                                                                                                                                                                                         |
| Environment         | Environment temperature          |                     | -10℃~40℃(temperature at 40℃ to 50℃, please derating for use)                                                                                                                                                                                                                                                                   |
|                     | Storage temperature              |                     | -20℃ to 65℃                                                                                                                                                                                                                                                                                                                    |
|                     | Environment humidity             |                     | Less than 90%R.H, no condensation of moisture                                                                                                                                                                                                                                                                                  |
|                     | Vibration                        |                     | Below 5.9m/s²(=0.6g)                                                                                                                                                                                                                                                                                                           |
|                     | Application sites                |                     | Indoor where no sunlight or corrosive,explosive gas, dust, combustible gas, oil mist, water vapor, dripping water or salt, etc                                                                                                                                                                                                 |
|                     | Altitude                         |                     | No derating is used below 1000m, and 1% derating is used for every 100m increase above 1000m. The highest altitude is 3000m                                                                                                                                                                                                    |
|                     | IP degree                        |                     | IP20                                                                                                                                                                                                                                                                                                                           |
| Product standard    | Product adopts safety standards  |                     | IEC61800-5-1:2007                                                                                                                                                                                                                                                                                                              |
|                     | Product adopts EMC standards     |                     | IEC61800-3:2005                                                                                                                                                                                                                                                                                                                |
|                     | Cooling method                   |                     | Forced air cooling                                                                                                                                                                                                                                                                                                             |

Operating keyboard (button key description)



Standard Configuration



Optional configuration



Optional configuration

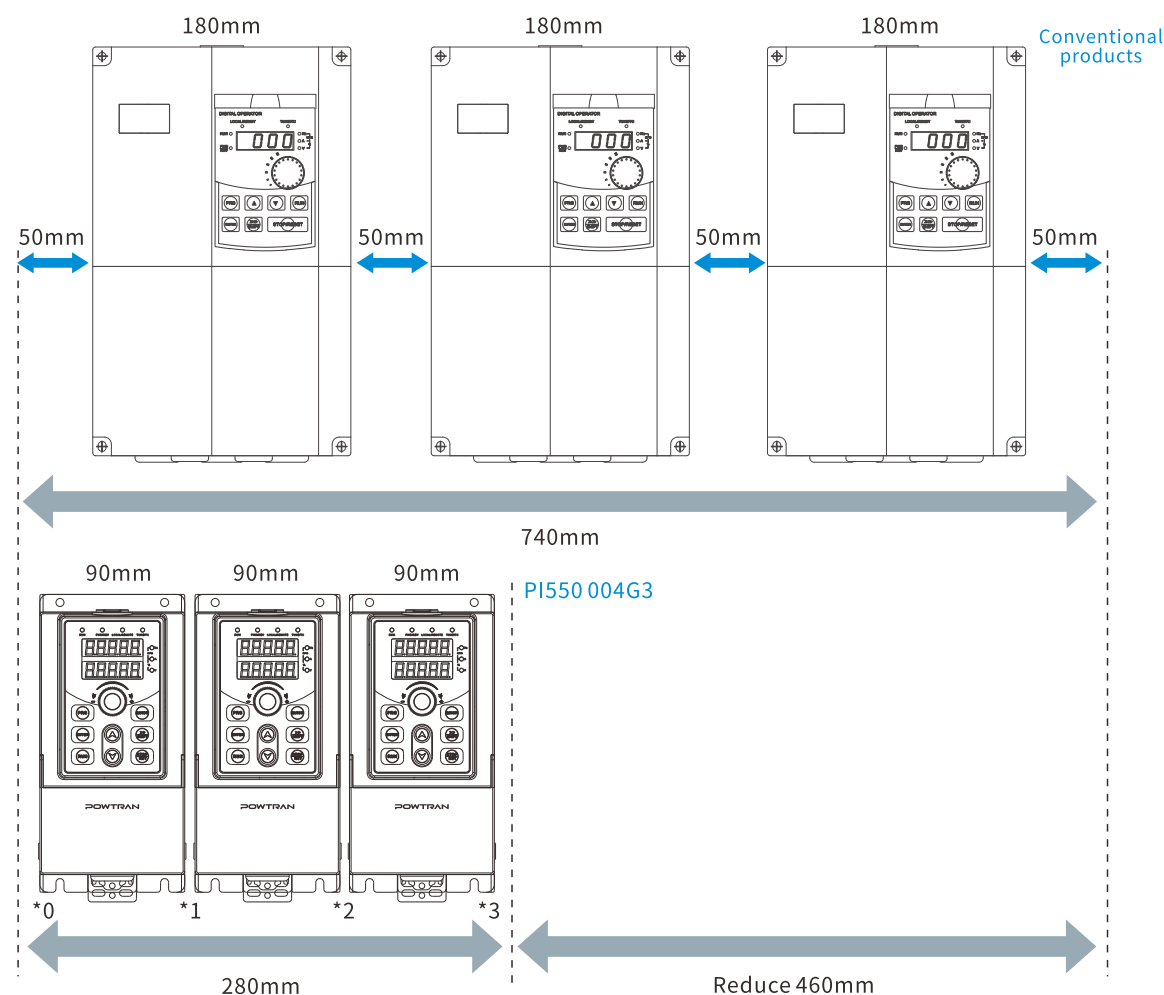
| Sign | Name                        | Function                                                                                                                                                                                                   |
|------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | Parameter Setting/ Exit Key | Enter top menu parameter change status<br>Exit from function option change<br>Return to status display menu from sub-menu or function option menu                                                          |
|      | Shift Key                   | Select circularly parameters under run or stop interface;<br>Select parameters when modifying the parameters.                                                                                              |
|      | Ascending Key               | UP key settled by parameter F6.18                                                                                                                                                                          |
|      | Decending Key               | DOWN key settled by parameter F6.19                                                                                                                                                                        |
|      | Run Key                     | Used for running operation in the keyboard mode.                                                                                                                                                           |
|      | Stop/Reset Key              | For stopping running in the running status; for resetting the operation in fault alarm status.<br>The function of the key is subject to F6.00                                                              |
|      | Enter Key                   | Enter into levels of menu screen,confirm settings.                                                                                                                                                         |
|      | Quick multifunction key     | This key function is determined by the function code F6.21.                                                                                                                                                |
|      | Keyboard encoder            | In query status: functional items increasing and decreasing<br>In modify status: function features or editing increasing or decreasing<br>In monitoring status: setting frequency increasing or decreasing |



## Optimized structural design

Book style narrow body design, reasonable utilization of space, greatly saving customers' main cabinet space and main cabinet costs. 11kw and below can be installed side by side

## 380V 4kW Example

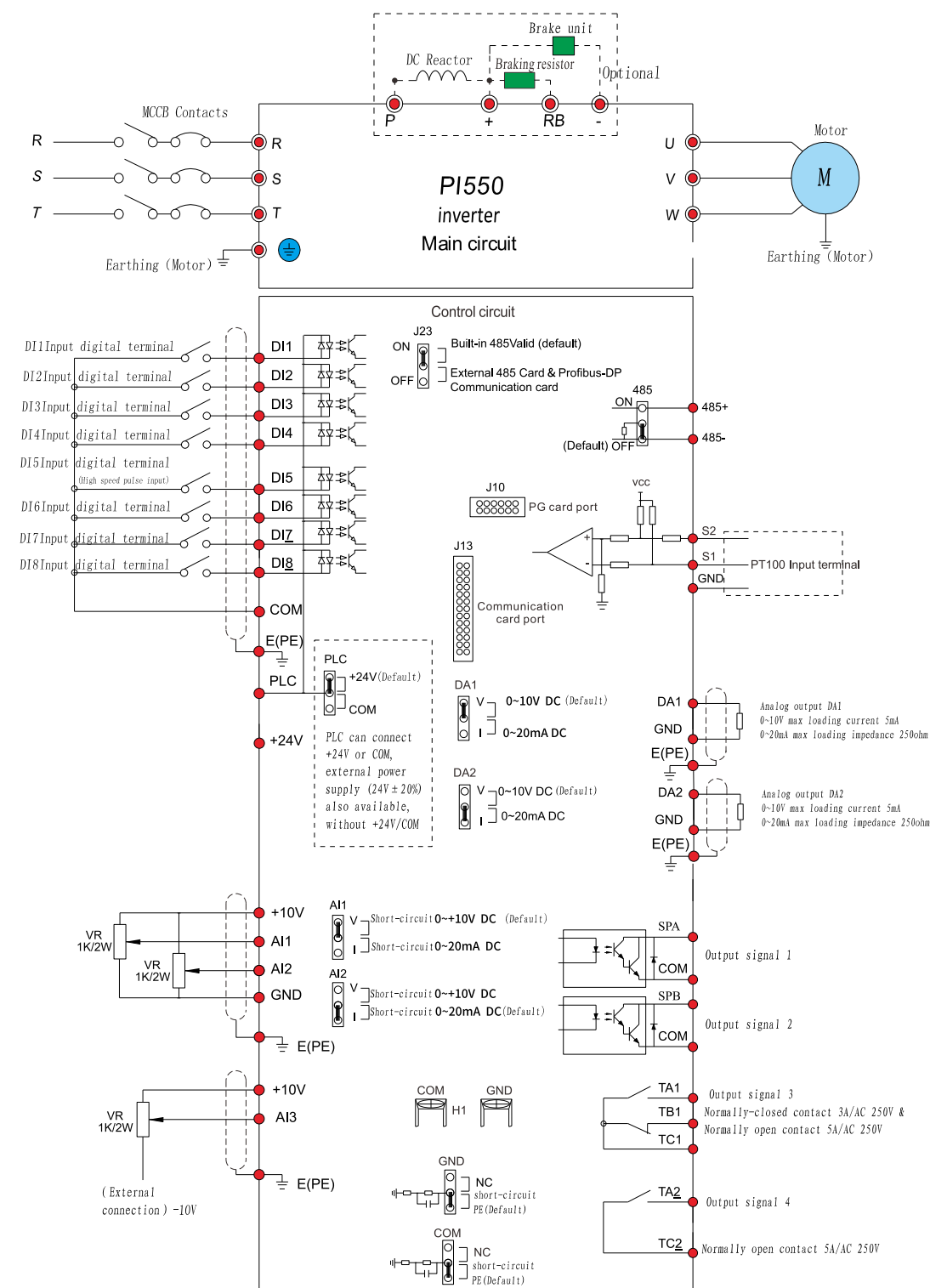


## Use of the environment

- 1.Environmental temperature -10°C to 50°C Above 40°C, the capacity will decrease 3% by each 1°C. So it is not advisable to use inverter above 50°C
- 2.Prevent electromagnetic interference, and keep away from interference sources.
- 3.Prevent the ingress of droplets, vapor, dust, dirt, lint and metal fine powder.
- 4.Prevent the ingress of oil, salt and corrosive gases.
- 5.Avoid vibration, Maximum amplitude is less than 5.9m/s ( 0.6g ).
- 6.Avoid high temperature and humidity or to exposure to rain, humidity shall be less than 90%RH (non-condensing). In the presence of corrosive gas, maximum relative humidity is no more than 60%.
- 7.Altitude: When the altitude exceeds 1000m, please reduce the rating by 1% according to the ratio of 100m; When the altitude exceeds 3000m, please contact the staff
- 8.Never use in the dangerous environment of flammable, combustible, explosive gas, liquid or solid.

## Wiring

Frequency inverter wiring is divided by main circuit and control circuit. Users must properly connect frequency inverter in accordance with the wiring connection diagram showing below.

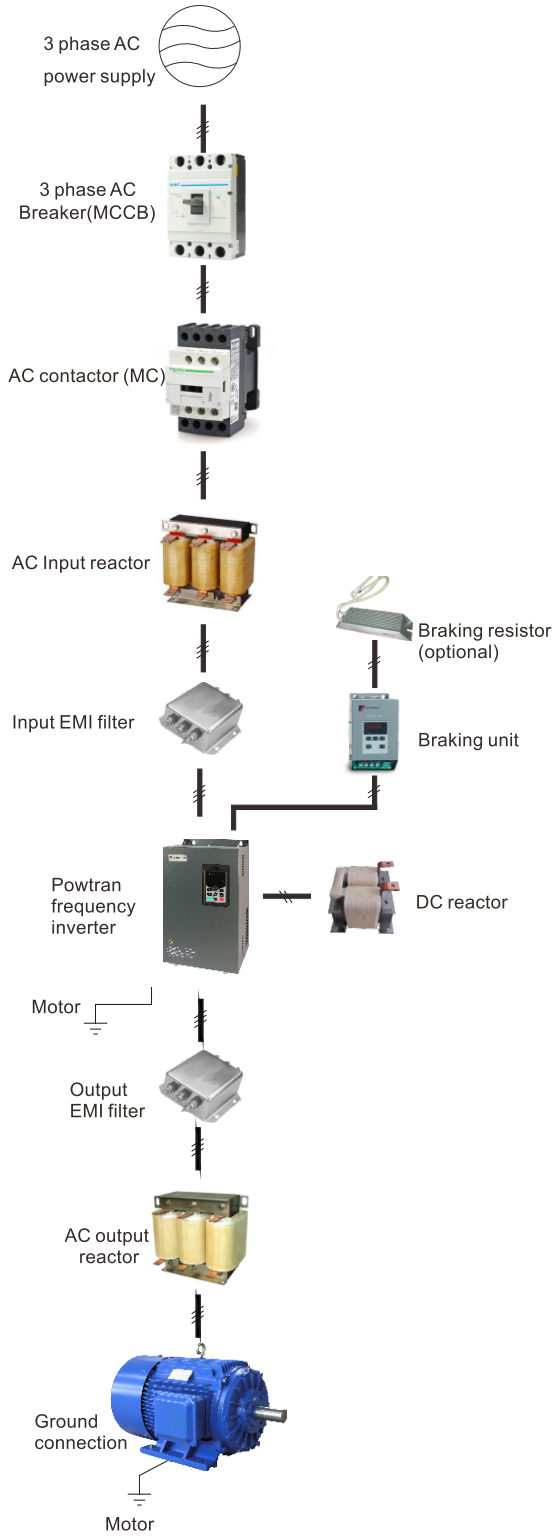




| Name                               | Specification                                                                                                                                                                                                                                                                                                                       |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electric cable                     | Device for transmitting signals                                                                                                                                                                                                                                                                                                     |
| Breaker                            | To prevent electric shock accidents and protect against short circuits to ground that may cause leakage current fires, please select leakage circuit breakers for inverter devices with high-order harmonic suppression functions. The rated sensitive current of the circuit breaker should be greater than 30mA for one inverter. |
| Input reactor<br>DC reactor        | Apply to improve the power factor on the input side of the inverter and suppress high-order harmonic current. Models 5R5G and above can be connected to an external DC reactor                                                                                                                                                      |
| Input filter                       | To suppress electromagnetic interference transmitted from the inverter to the public power grid through the input power line, please install it as close to the input terminal side of the inverter as possible during installation.                                                                                                |
| Braking unit ,<br>braking resistor | Base No. A1~A5 only need to be configured with braking resistor<br>Base No. A7 and A19 , special customized products with suffix letter B, only need to be configured with braking resistor<br>Base No. A8~A18, and A6 need to be configured with braking resistor and braking unit.                                                |
| Output filter                      | Suppress the interference generated from the inverter output wiring. Please install as close to the inverter output terminal as possible.                                                                                                                                                                                           |
| AC output reactor                  | Used to extend the effective transmission distance of the inverter and effectively suppress the instantaneous high voltage generated when the IGBT module of the inverter is switched                                                                                                                                               |

Notice:

1. PI550 series comes standard with a film-coated LED keyboard, and an optional LCD keyboard;
2. PI550G3 30kW and below models and PI550G3B 37-75kW, built-in braking unit;
3. Braking unit adopts POWTRAN standard braking unit PB200 series. Please refer to the PB200 manual for details.

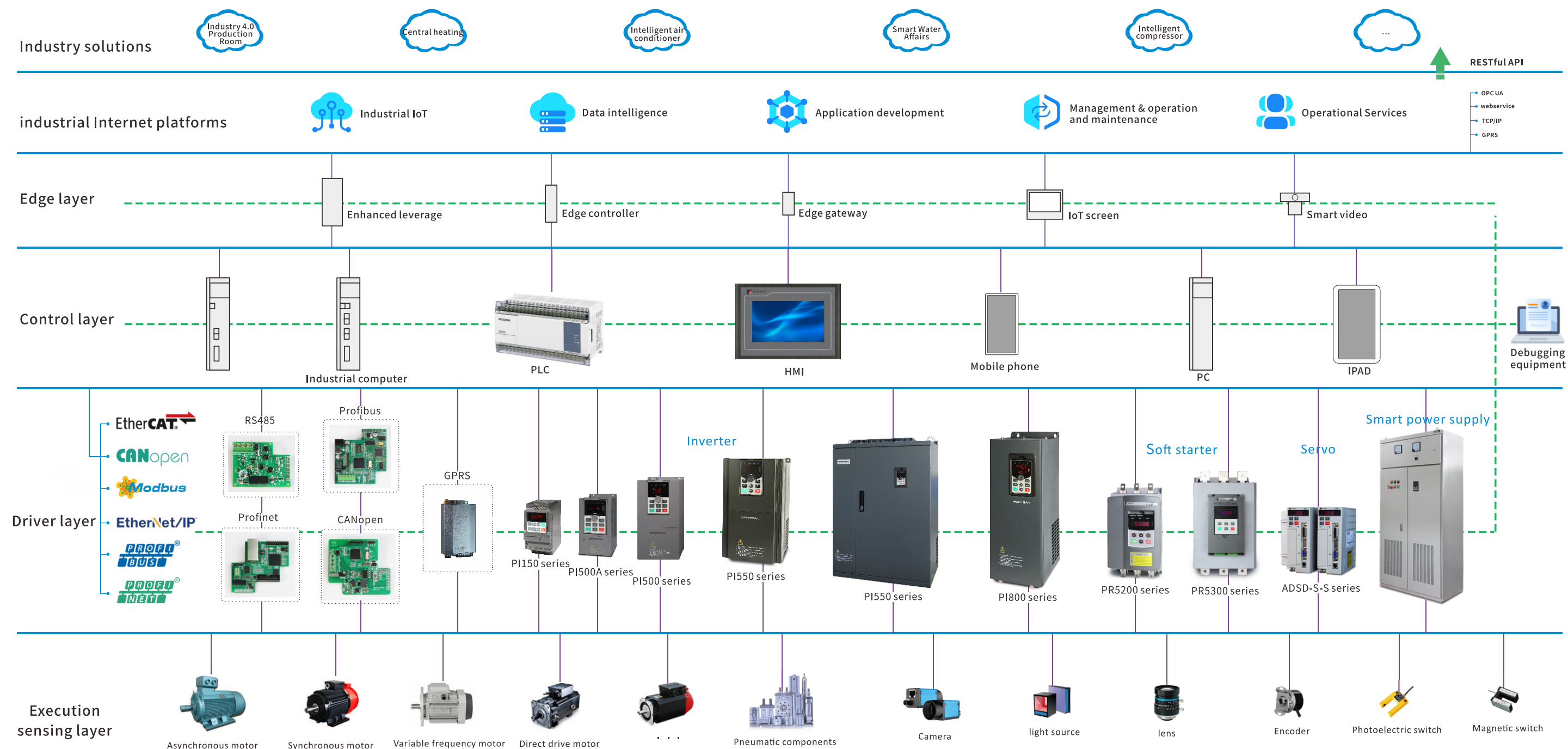


Universal encoder and Communication & I/O Expansion Cards

PI550 series is equipped with various types of expansion cards In order to facilitate customer selection, mainly including PG cards that meet closed-loop control, communication expansion cards that meet multiple communication protocols, and I/O expansion cards that meet multiple I/O points. The main introduction is as follows:

| Pictures | Name                                      | Description                                                                                                                                                                                                                                                                                                   |
|----------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | PI9000_PG 1<br>ABZ incremental<br>encoder | Differential input PG card, without frequency dividing output. OC input PG card, without frequency dividing output. 5V,12V,24V voltage is optional.please provide voltage and pulse input mode information when ordering.                                                                                     |
|          | PI9000_PG 3<br>UVW incremental<br>encoder | UVW Differential input PG card, without frequency dividing output. 5V voltage                                                                                                                                                                                                                                 |
|          | PI9000_PG 4<br>Rotational<br>transformer  | Adjusting the output voltage and frequency of rotational transformer, Frequency inverter can achieve precise control of the motor to meet different working requirements.                                                                                                                                     |
|          | PI9000_PG 5<br>ABZ incremental<br>encoder | OC input PG card, with 1:1 frequency dividing output. 5V,12V,24V voltage is optional, please provide voltage and pulse input mode information when ordering.                                                                                                                                                  |
|          | Profibus-DP:<br>PI9000_DP1                | Supports the use of PPO1, PPO2, PPO3, and PPO5 to meet users' perfect control of multiple functions of Frequency inverter.                                                                                                                                                                                    |
|          | Profinet:<br>PI9000_CAN.T021              | It complies with the internationally accepted Profinet Ethernet standard, improves communication efficiency, facilitates the realization of the inverter networking function, and enables frequency inverter to become a slave station of the fieldbus and accept the control of the fieldbus master station. |
|          | CANopen:<br>PI500_PN_T03                  | CAN bus interface fully complies with the ISO/DIS11898 standard, allowing frequency inverter to be connected to the CANopen fieldbus network as a slave station, following the CAN2.0A standard and compliant with the CANopen standard protocol DS01.                                                        |
|          | I/O expansion card<br>PI9000_IO2          | Expand 2 DI input terminals and 2 relay output terminals, which can be expanded for STO function                                                                                                                                                                                                              |

# Industrial automation and digital solution platform





## Empower intelligent manufacturing , support dual carbon goals

