Introduction of GD20&GD200A

Dept.：LV Product Line

Goodrive20 High performance mini vector control inverter

(Single phase: 0.4~2.2KW

Three phase: 0.75~2.2KW)

1. GD20

GD10

1. No vector control
2. Normal performance
3. No high-speed pulse input

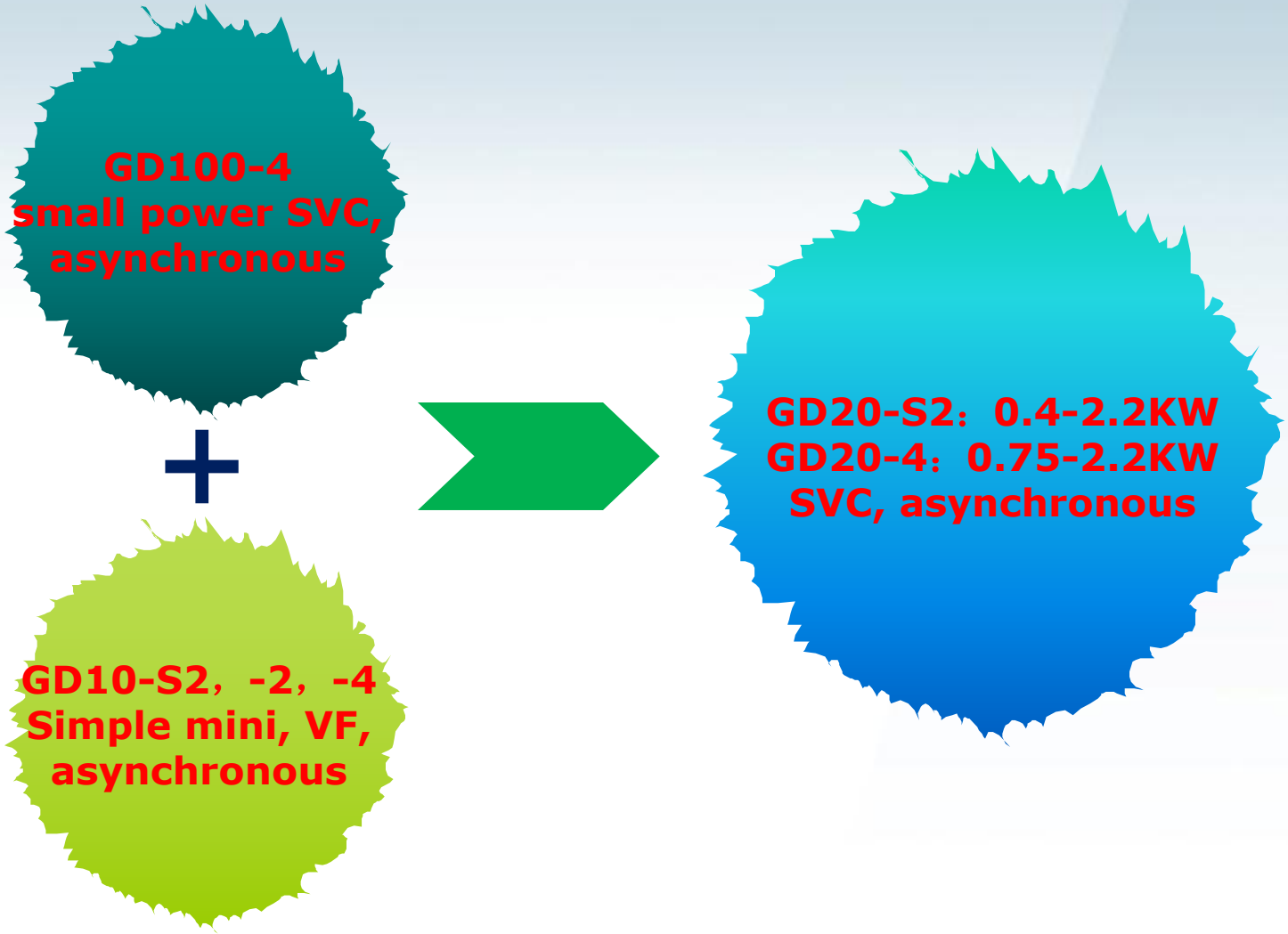
GD100

1. Better performance, but no single phase product
2. Bigger size

GD20

1. Improve performance: quick start/stop, torque control
2. More function: HDI, Y
3. Compact size, rail mounting

1. GD20


GD100-4
small power SVC,
asynchronous
+
GD10-S2，-2，-4
Simple mini, VF,
asynchronous
GD20-S2：0.4-2.2KW
GD20-4：0.75-2.2KW
SVC, asynchronous

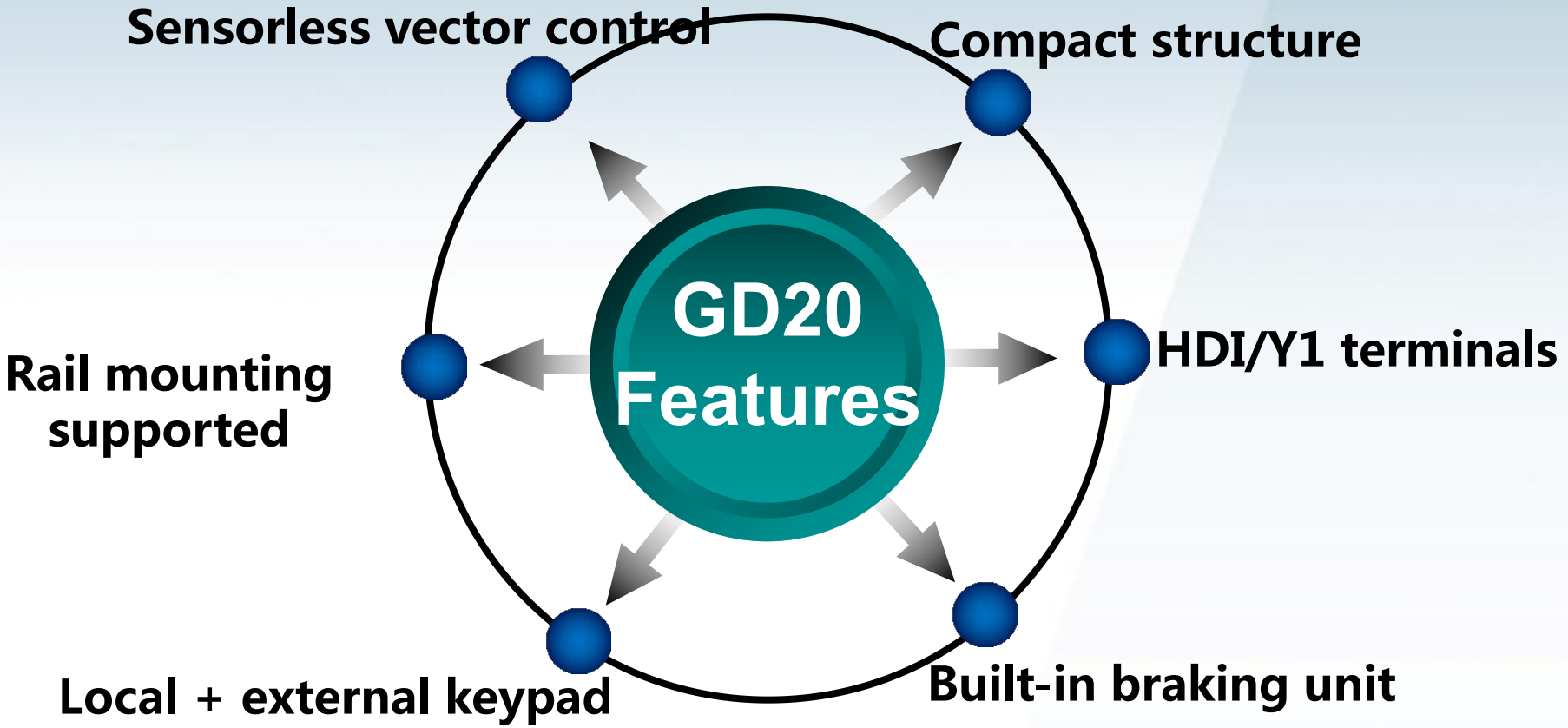
1. GD20

Goodrive20 series inverter is a mini general purpose vector control inverter, adopt international advanced vector control algorithm, has excellent features. Goodrive20 support wall mounting and rail mounting, smaller size, saving installation space, it is a high performance mini product for small power market.

Single phase 220V：0.4~2.2kW

Three phase 380V：0.75~2.2kW

1. GD20


Sensorless vector control
Compact structure
GD20
Features
Rail mounting
supported
HDI/Y1 terminals
Local + external keypad
Built-in braking unit

2. Product show

◆New structure design, mini size

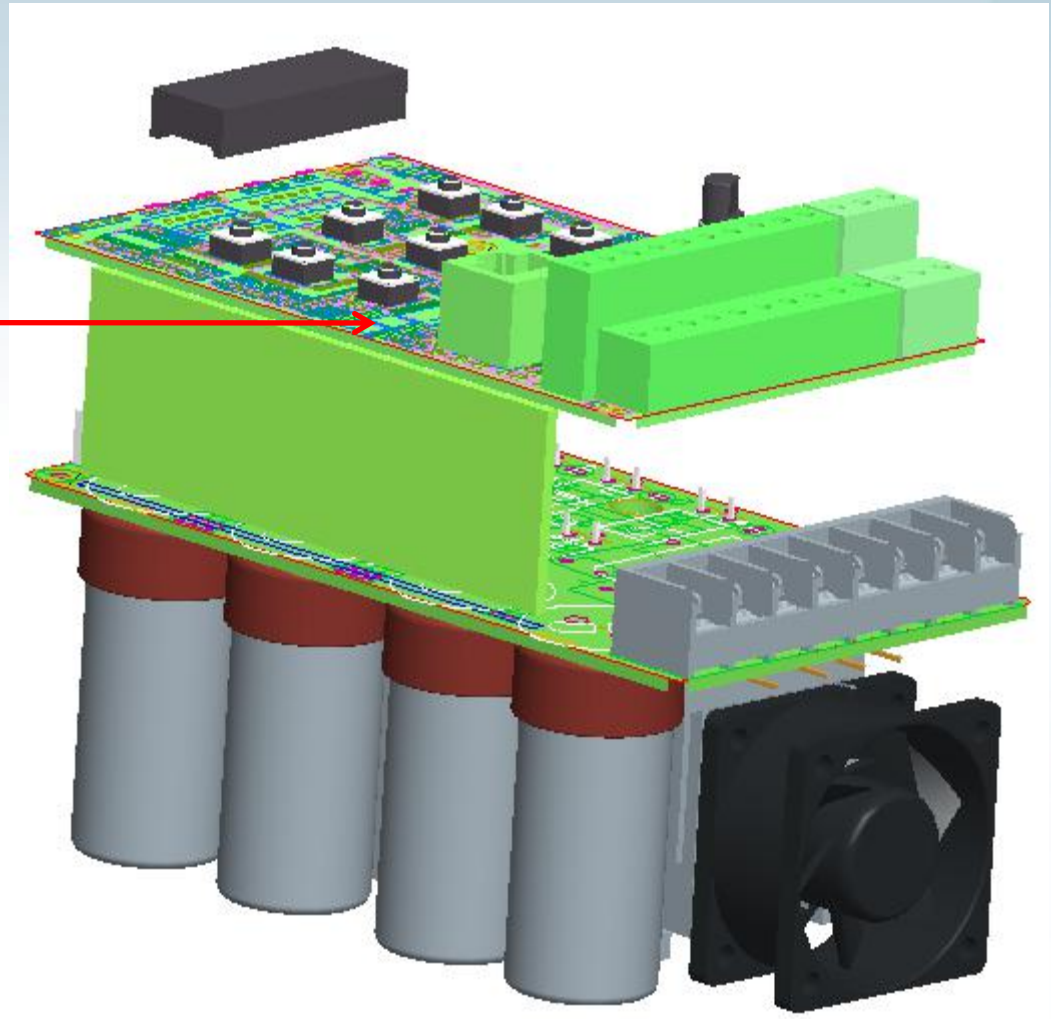
2. Product show

◆External keypad

Standard local foil keypad, support external LED normal keypad and LED parameter copying keypad, convenient for user

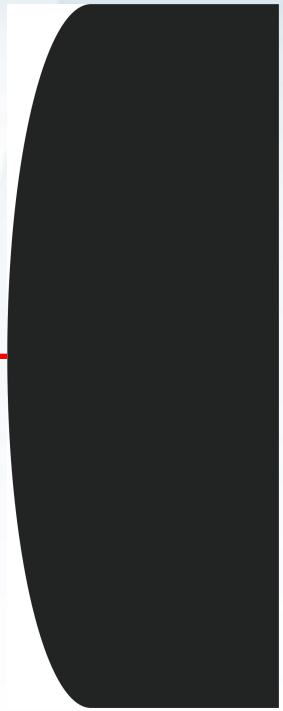
2. Product show

Integrated control board and I/O terminals



2. Product show

Cooling holes cover, increase protection (need to derate 10%)



2. Product show

Top grille: remove the covers when install side by side

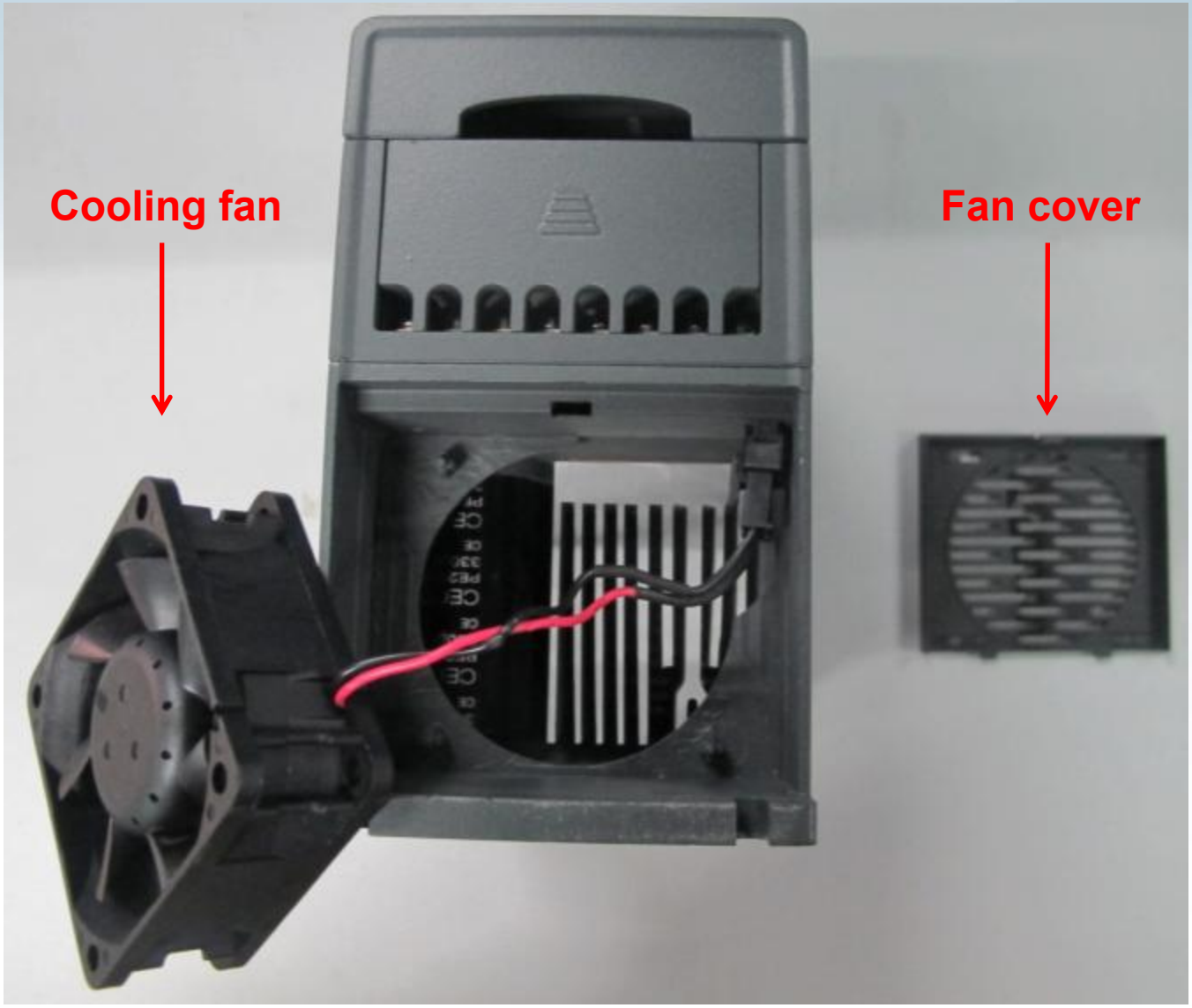
Rail mounting side by side

2. Product show

Support wall mounting and 35mm rail mounting

2. Product show

2. Product show



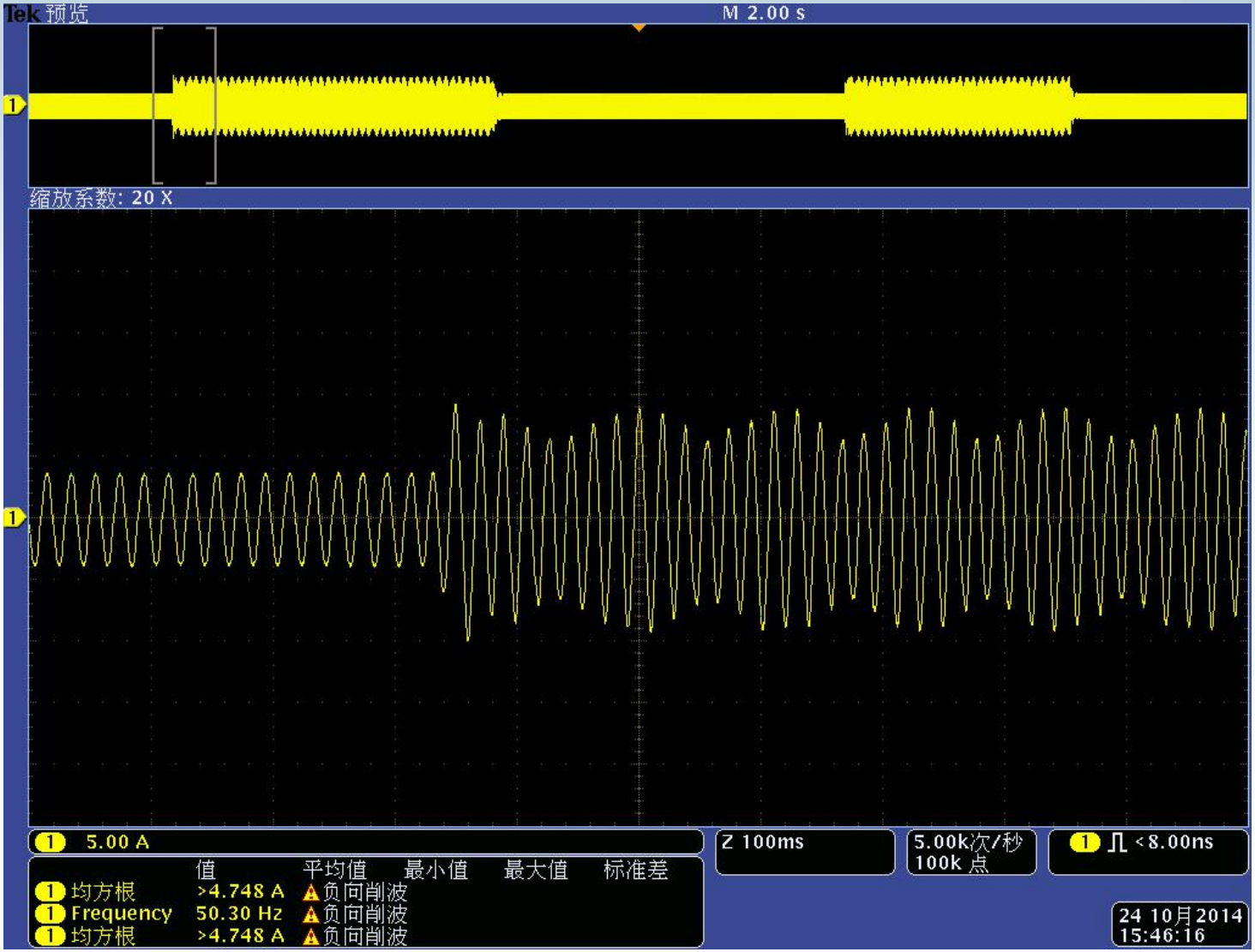
3. Low power product series

GD10

GD100

GD20

4. Excellent vector control performance



Waveform of sudden load and sudden unload at SVC

5. GD20 product features

- **Excellent control performance**
  Advanced sensorless vector control
- **Mini structure**
  Smaller size, saving installation space
- **Rich interface**
  Standard RS485, rich input/output terminals, external keypad;
  Internal HDI, Y terminal, standard built-in braking unit
- **Varied installation methed**
  Wall mounting and rail mounting
- **Easy operation and maintenance**
  Individually removable fan
  Optional parameter copying LED keypad
- **Rich functions for application**
  Simple PLC, multi-step, internal PID, torque control, multi-point V/F curve

6. Applications

Textile machinery

Treadmill

Trimmer

Garment cutting machine

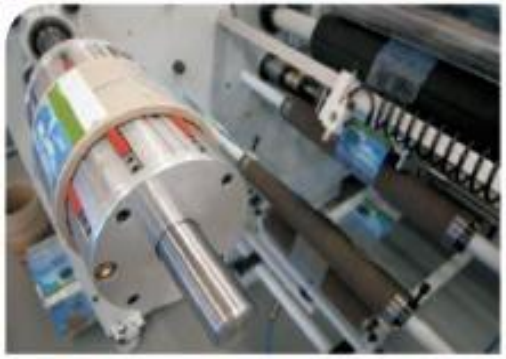
Bag making machine

Engraving machine

6. Applications

Food machinery
(packing, conveyer…)

Plastic machinery



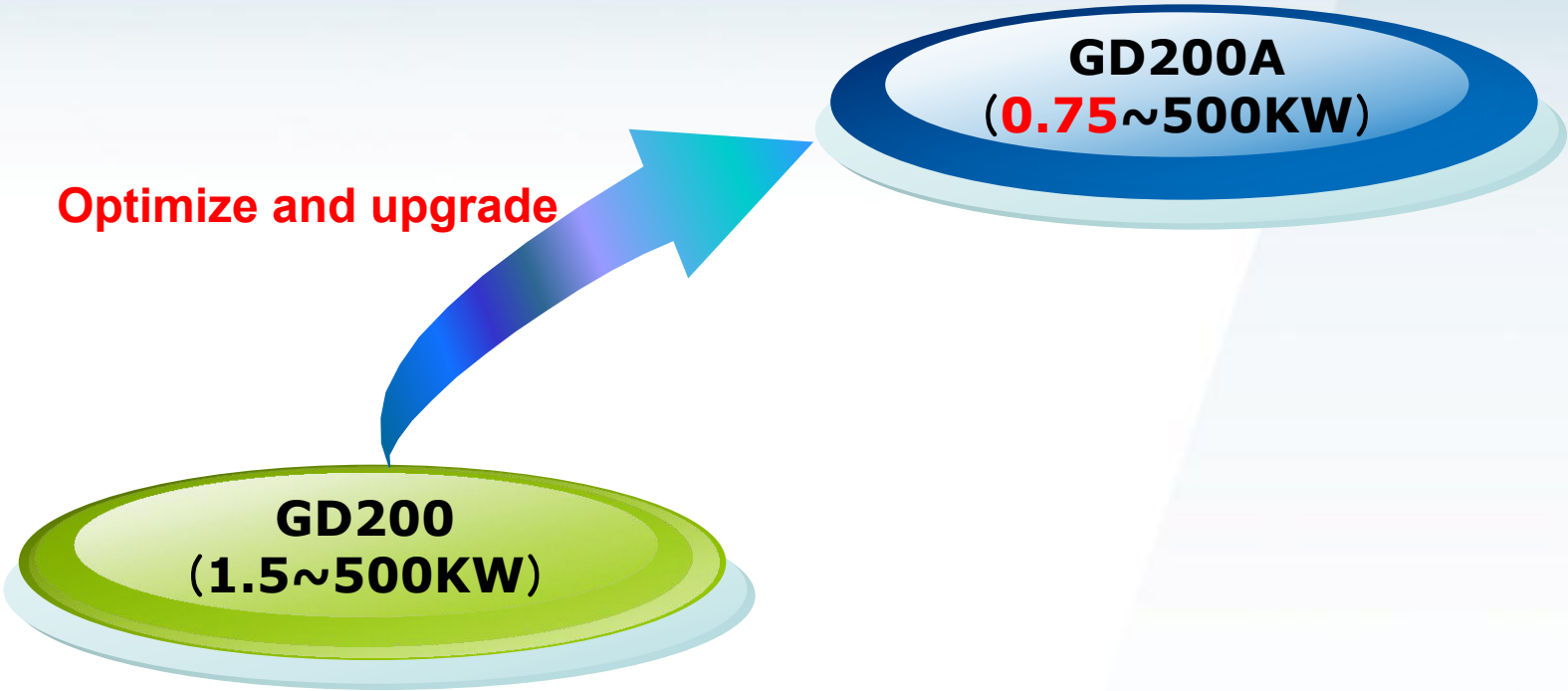
Printing and packaging machinery

Ceramics machinery

Goodrive200A General Purpose Vector Control Inverter

(Three phase 380V: 0.75~500KW)

1. GD200A



1. GD200A

•Add 0.75kW product;
•Sensorless vector control (same to GD200)

≤15kW :
•Same size , foil keypad;
•Integrated control board and I/O terminal;
•2 analog inputs (GD200 3 inputs);
•Support external keypad

≥18.5kW :
•Same appearance, standard keypad;
•Removable I/O board;
•2 analog inputs

Optimized :
•Optimized external keypad bracket;
•≤15kW use foil keypad and support external keypad;
•Optimized cable inlet, easy wiring;
•Add hardware input phase loss protection (≥4kW) ;
•Optimized C3 filter

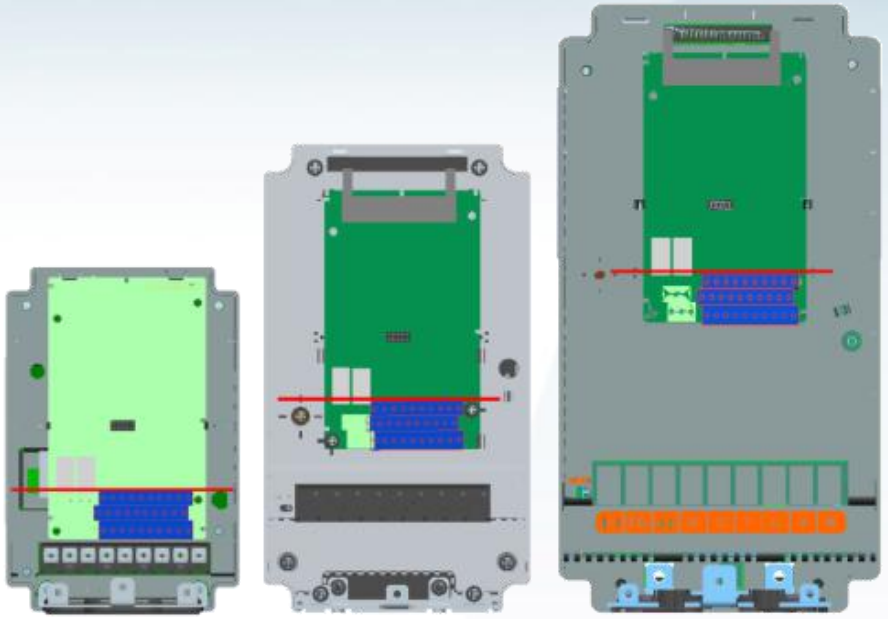
2. Product show

2. Product show

2. Product show

≥18.5kW

Removable I/O board

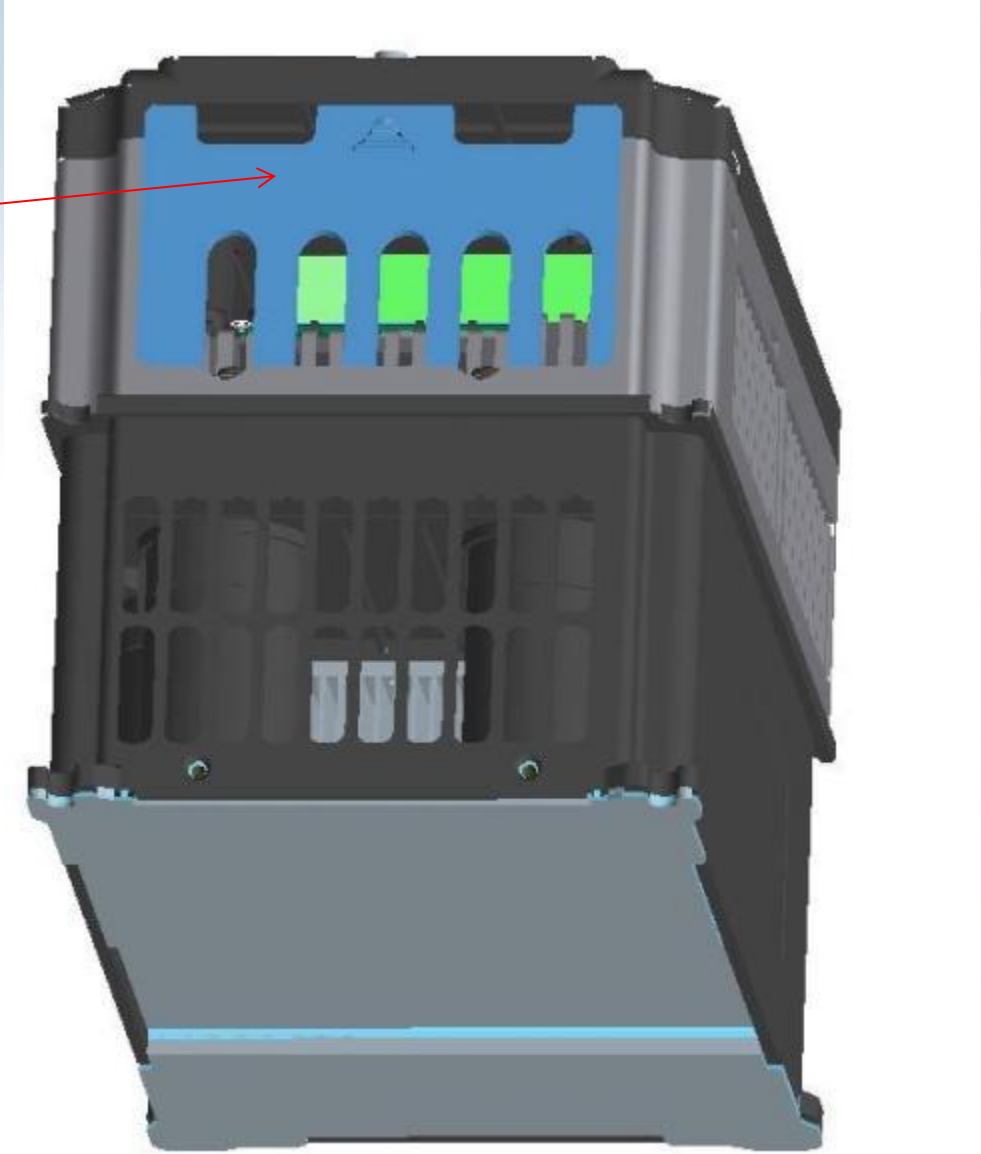


≤15kW

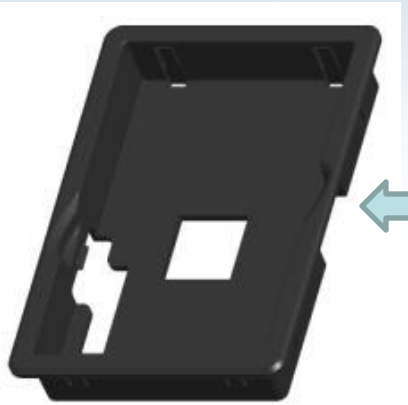
Integrated control board and I/O terminals

2. Product show

≤15kW Optimized cable inlet, convenient to wiring



2. Product show



1. Optimized keypad bracket, small and easy use
2. Installation hole compatible with CH series keypad

1. External keypad, optional
2. Local keypad and external keypad display at the same time

2. Product show

2. Product show

3. Full series appearance

≤15KW: Plastic shell

18.5~30kW: Plastic shell

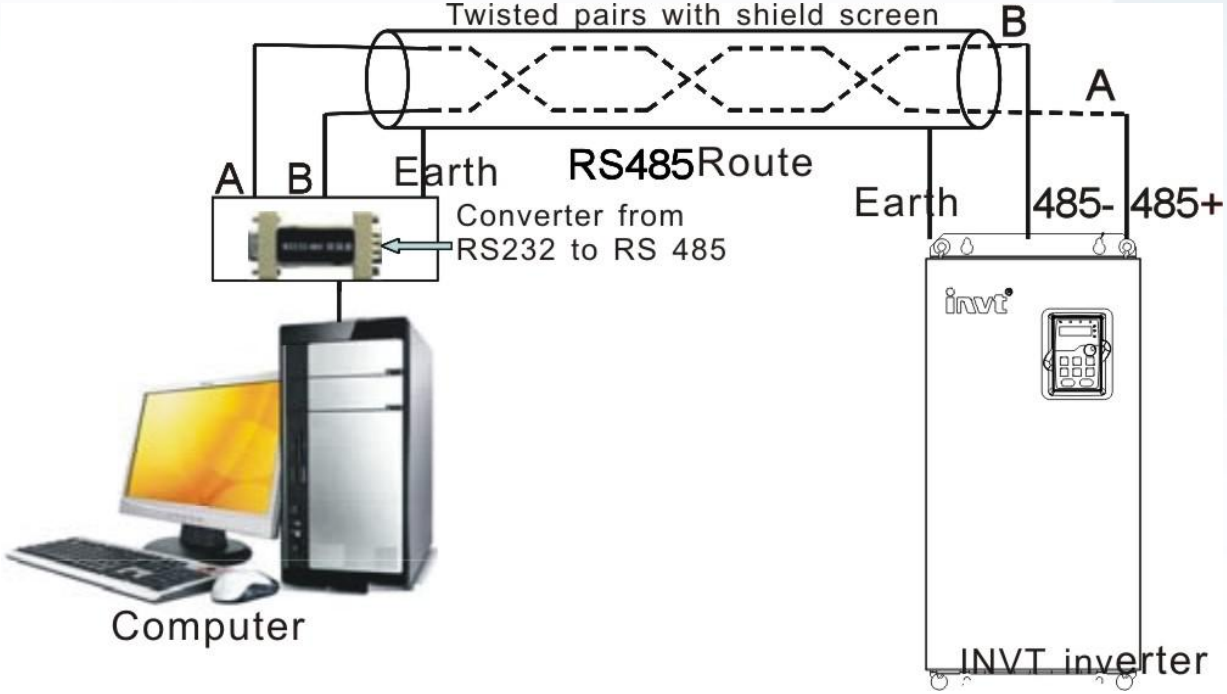
≥37KW: Iron shell

4. Product features

1. Built-in RS485 interface, support ModBus protocol

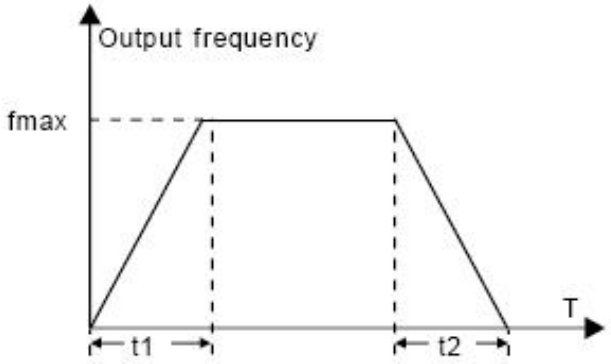
✓ModBus protocol add ASCII mode supporting

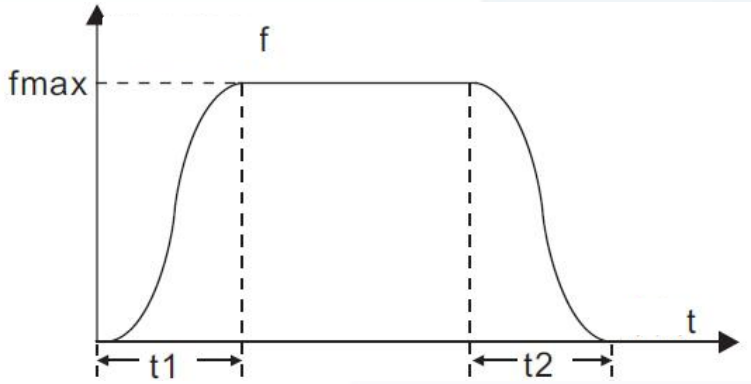
GD200A built-in RS485 interface, adopt international standard ModBus protocol, support RTU and ASCII mode



2. Support linear and S curve ACC/DEC

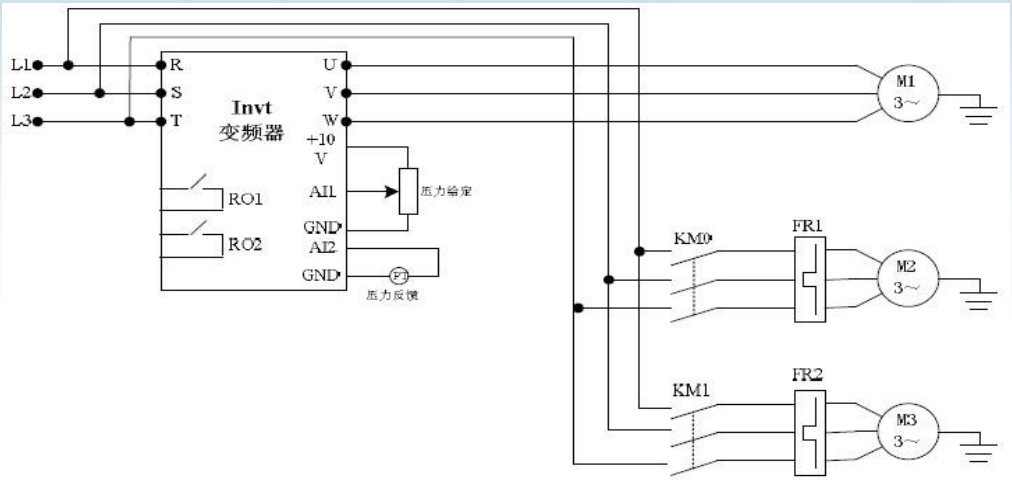
Add S curve ACC/DEC, the output frequency increase or decrease as S curve, compatible in applications require smooth start and stop

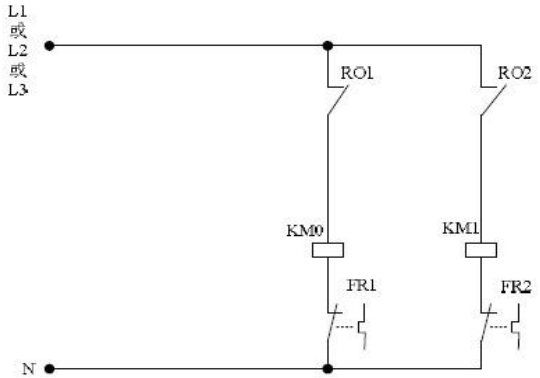




4. Product features

3. Simple water supply function



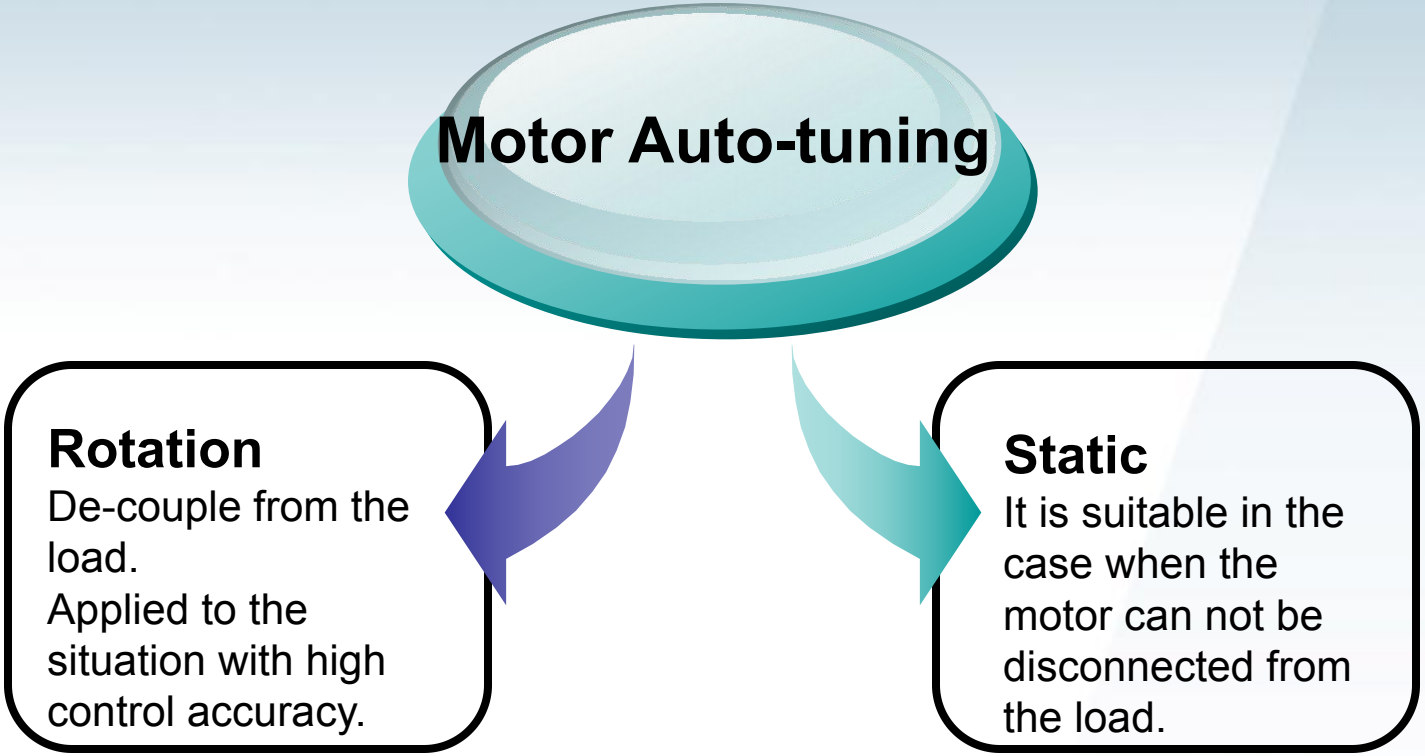


M2 and M3 are auxiliary motors which are controlled by RO1 and RO2.

PID constant-pressure automatic control system is formed by the inverter through pressure feedback.

The pressure reference can apply analog or keypad input， Modbus communication protocol is also supported.

4. Accurate motor auto-tuning

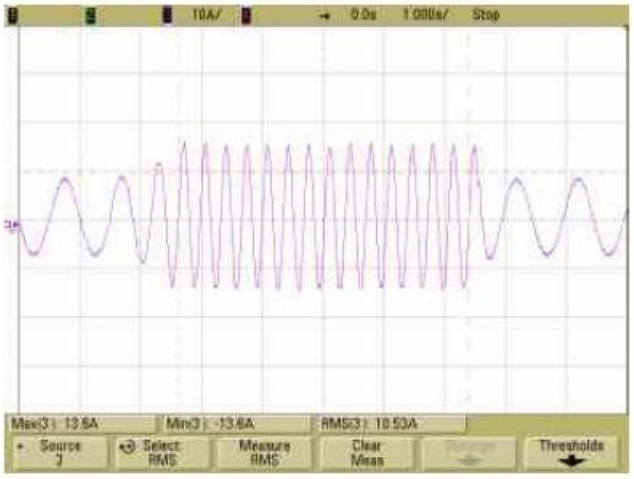


Convenient debugging, easy operation, high control accuracy and quick response speed.

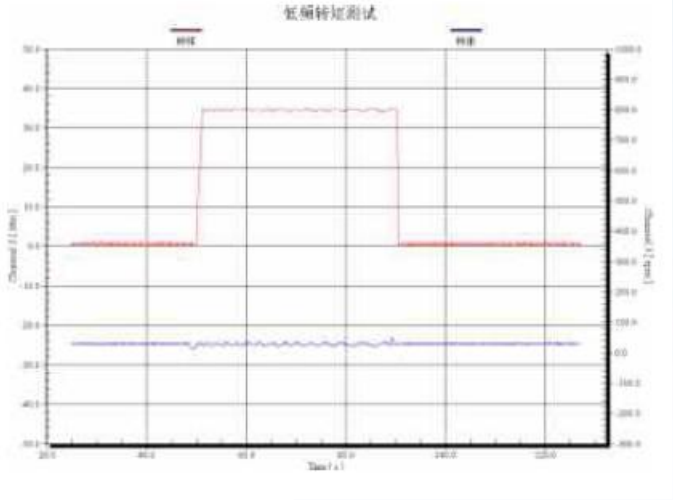
4. Product features

5. Advanced sensorless vector control and excellent performance

Starting torque	Dynamic response	Speed ratio	Speed accuracy
0.5Hz/150% of rated torque	< 20ms	1:100	±0.2%



Current



Torque and speed

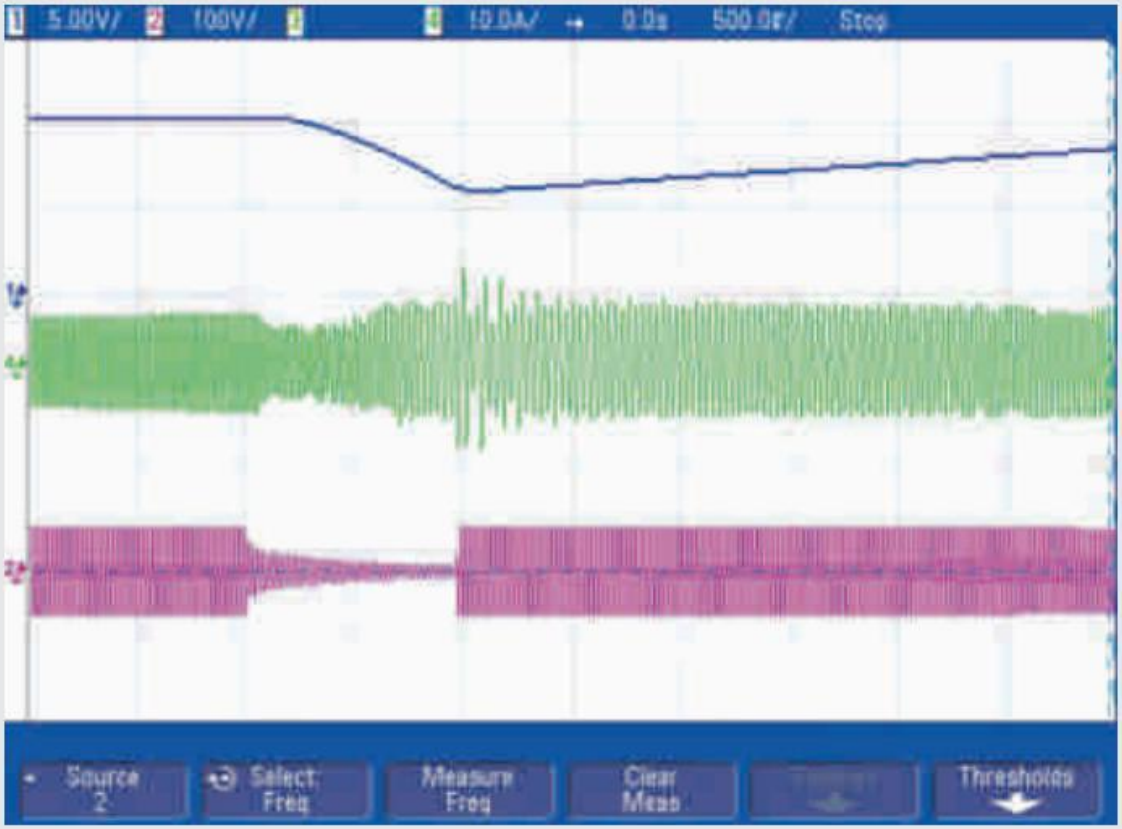
Sudden load and unload waveform of asynchronous motor at 0.5Hz （SVC）

4. Product features

6. Multiple braking method, realize quick stop

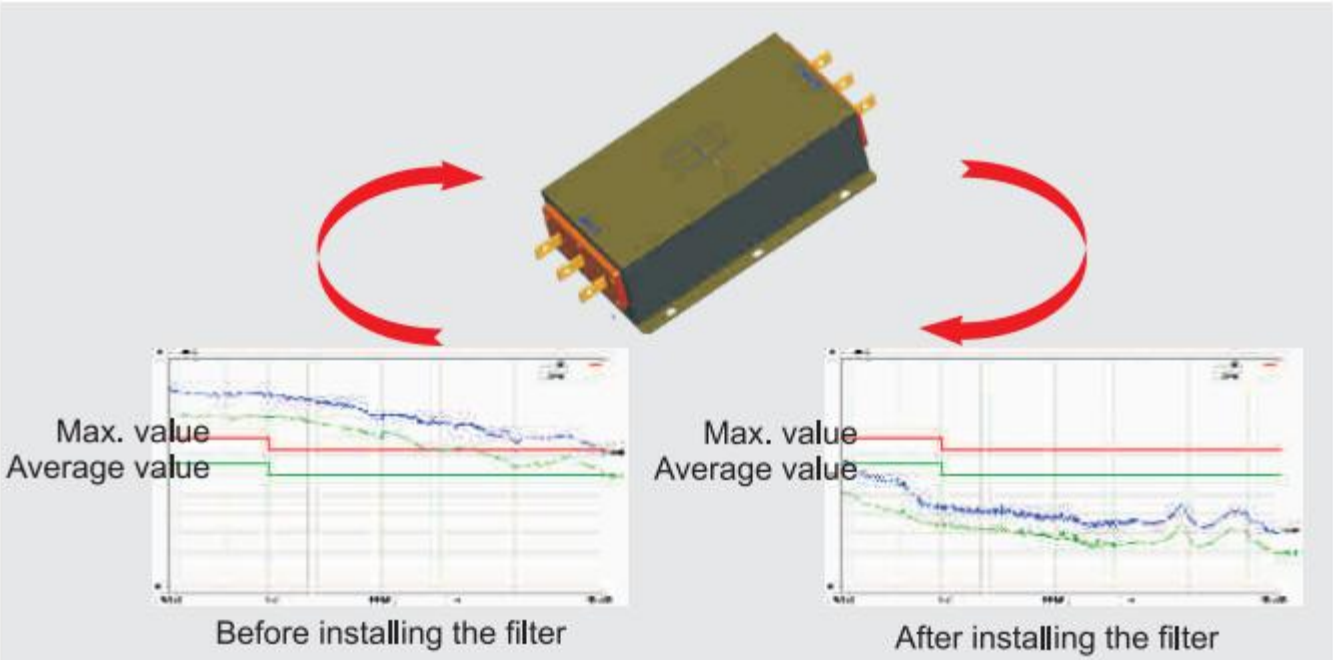
Dynamic Braking	DC Braking	Flux Braking	Short Braking
Configure braking units and resistors	No need to configure braking units and resistors	No need to configure braking units and resistors	No need to configure braking units and resistors: quick braking
Available on the situation of big inertia load and frequent braking	Available on the situation when start the running motor after braking and the situation when keep the moment output after braking to zero speed	Available on the instant stopping situation with big inertia load and no frequent braking	Only available on quick braking of PM motor
Big braking torque and quick braking	Not available on the situation of big inertia load or instant stopping braking in high speed running	Not available on the situation of big inertia load and frequent and braking(the energy consumed on the stator and its cooling is better than DC braking)	The energy consumed on the stator and its cooling is better than DC braking

7. Continuous running in instantaneous power off



The inverter can keep running if the grid voltage drops and used in the situation with high requirement such as fiberic and textile production line.

8. Internal C3 filter (need to connect J10 jumper), optional external C2 filter



Conductive interference test of the power supply terminals

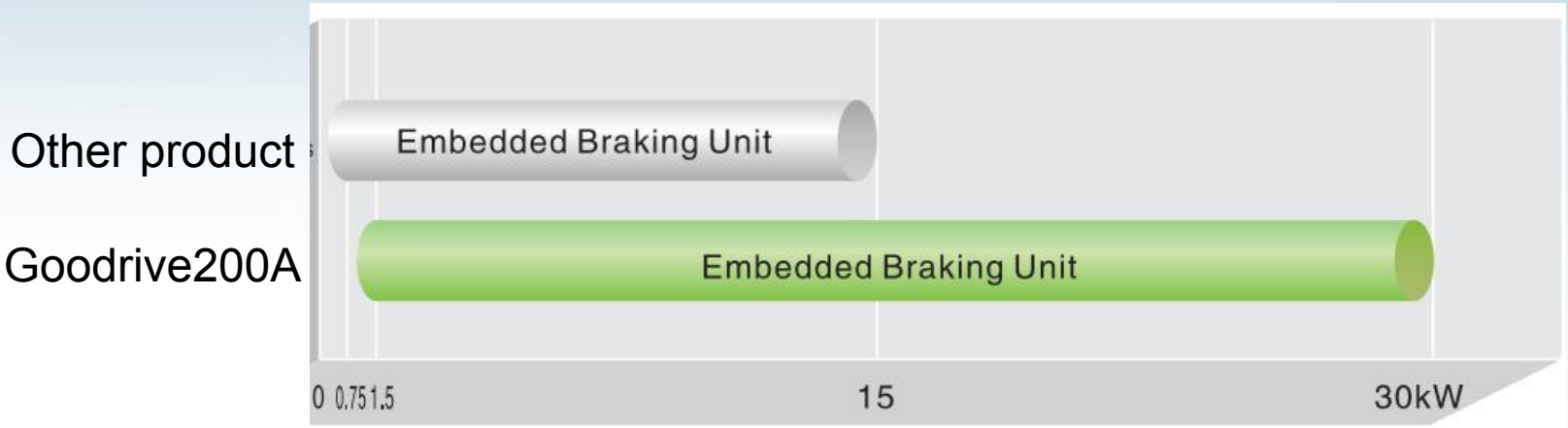
Remarks:
(1)C2 filter: EMC performance of the inverter achieves the limited usage requirement in civil environment.
(2)C3 filter: EMC performance of the inverter achieves the limited usage requirement in industrial environment.

4. Product features

9. Support common DC bus

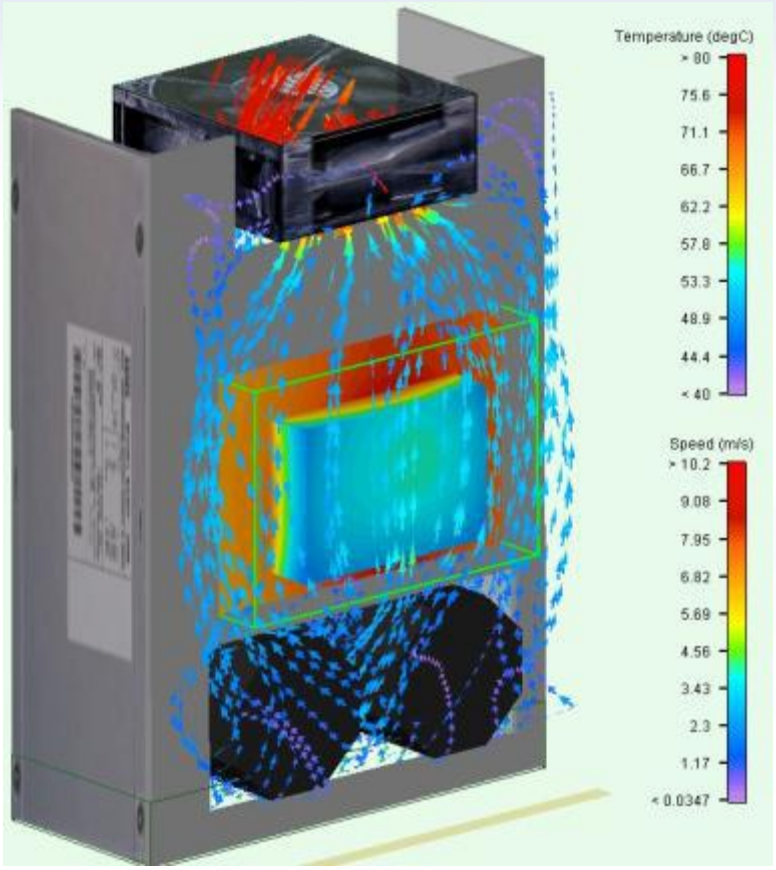
4. Product features

10. 0.75~30kW built-in braking unit

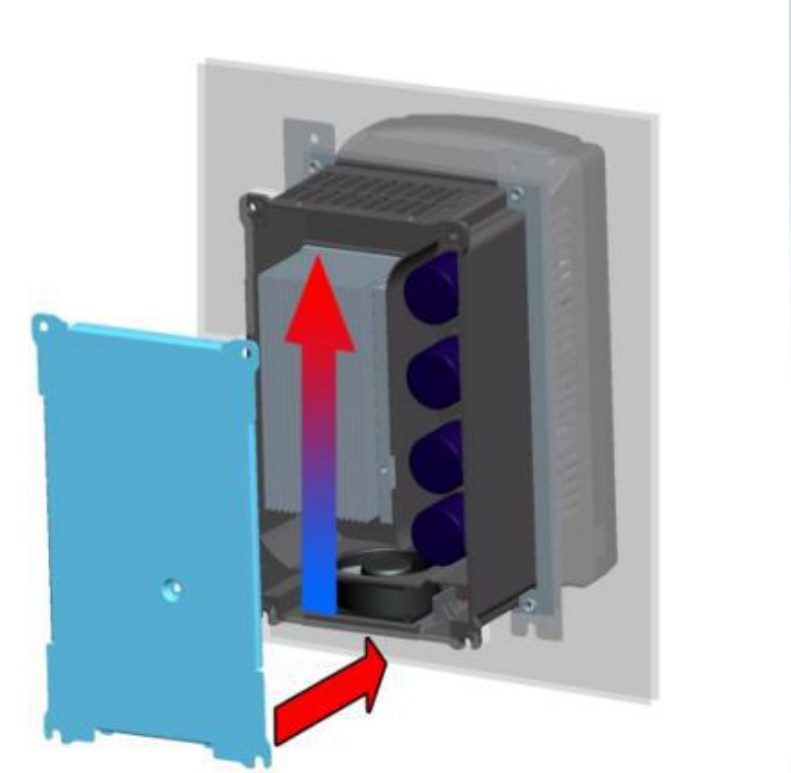


Reduce the occupied space and decrease cost

11. Advanced thermal simulation design



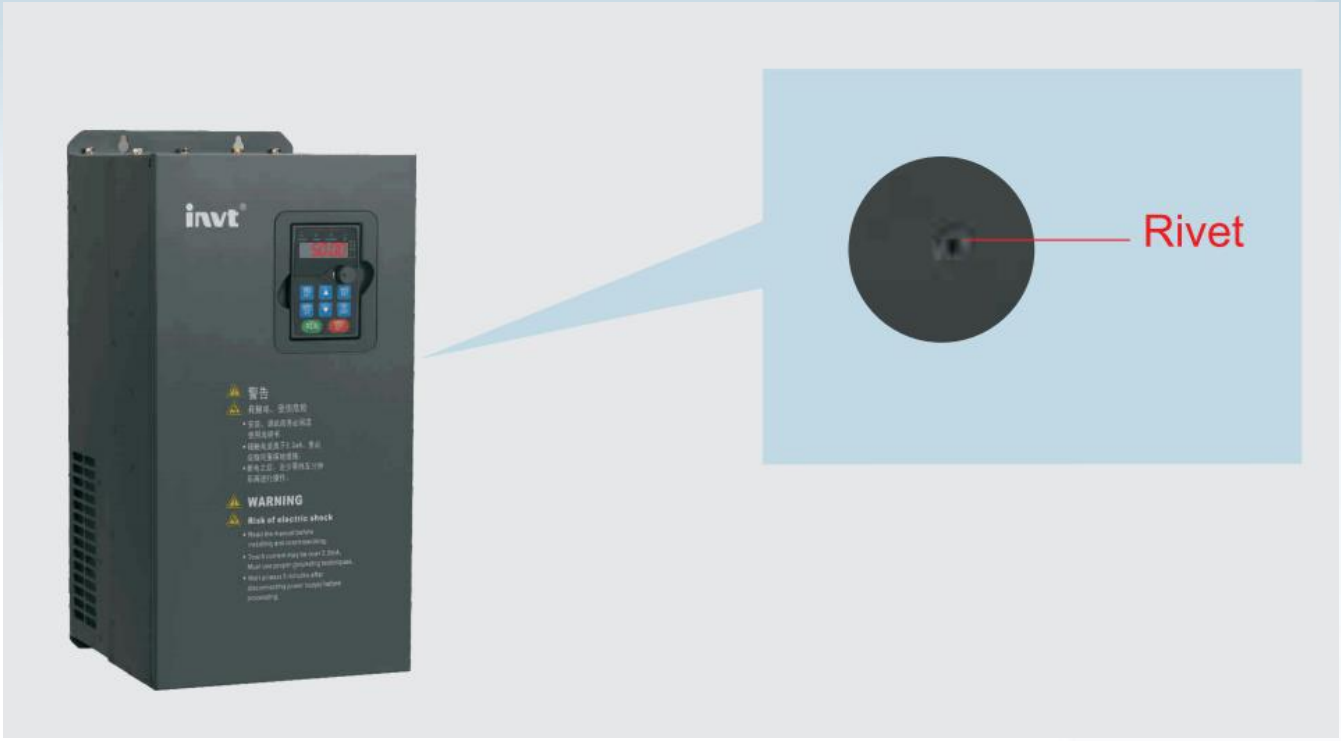
12. Separate air duct, increase reliability and life time



The separate air duct prevents the contaminants into the electronic parts/components and greatly improves the protective effect of the inverter, as well as its reliability and service life, to adapt various complicated site environments. It can also facilitate the heat-releasing in control cabinets and the heat-releasing design of the customer.

4. Product features

13. Rivet design ensure the reliable of integration connection



Greener
Stronger corrosion-resistance

Proper grounding
Excellent EMC performance

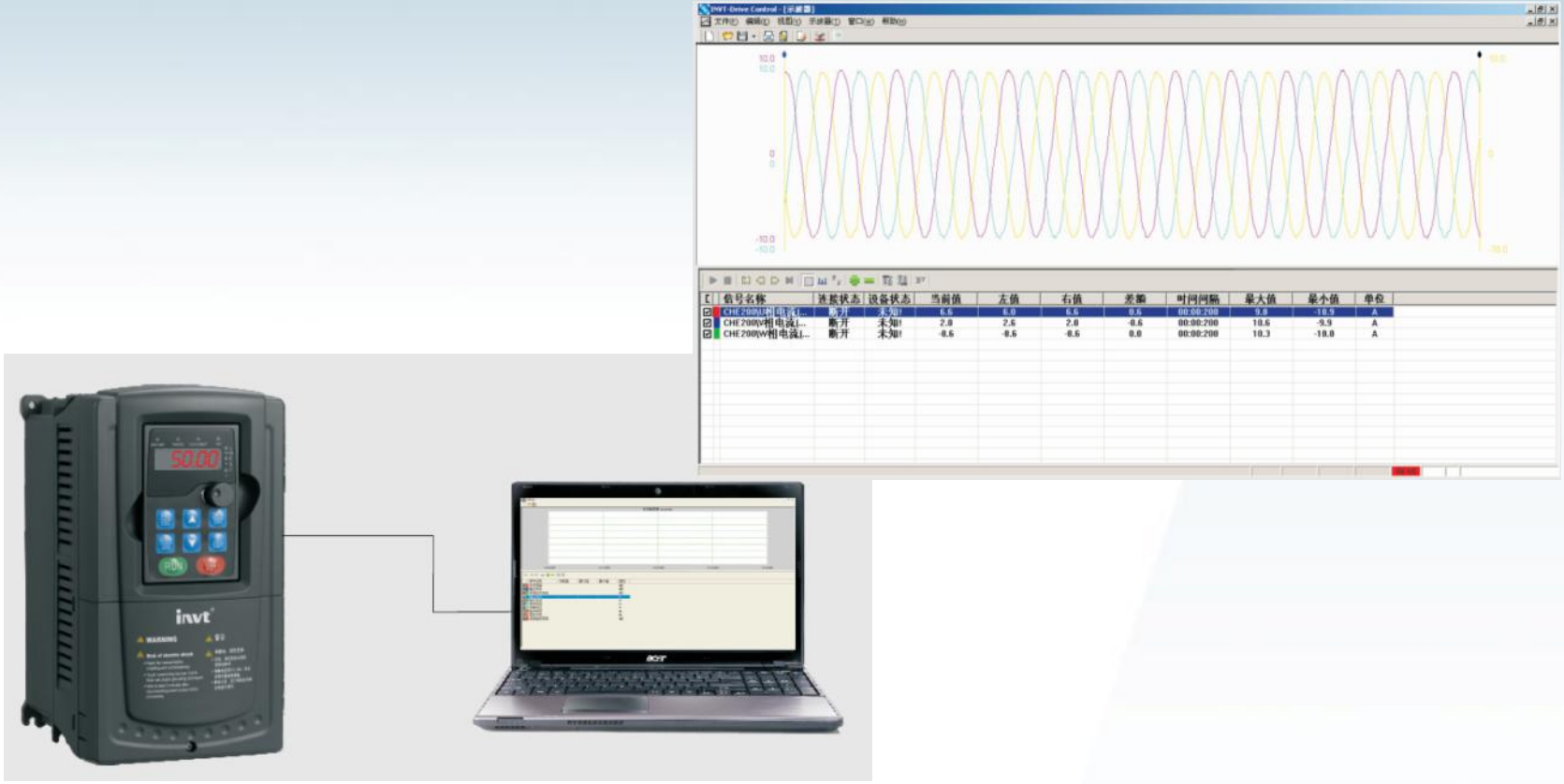
4. Product features

14 . Rich I/O terminals

Type	Quantity	Features
Digital input	8	Max. input frequency: 1KHz, Support NPN and PNP
High speed pulse input	1	Maxi. Input frequency: 50kHz Support NPN and PNP
Analog input	2	1 channel of（0~10V/0~20mA）, 1 channel of (-10V～+10V)
Digital output	1	Max. output frequency: 1KHz
High speed pulse output	1	Max. output frequency: 50kHz
Analog output	2	0～10V，0～20mA
Relay output	2	3A/AC250V，1A/DC30V，NO+NC

4. Product features

15. Easy operation upper computer software



The software carries out tracking and fault location with the function of oscilloscope, making more convenient debugging and programming and facilltaion the current monitoring, back analysis and engineering management.

5. Optional parts

1. Flange Mounting Panel

Needed in 1.5–30kW inverters
Not needed in 37–200kW

2. Installation Base

Only optional in 220–315kW inverters .Its bases rector and an output AC rector can be built–in an input AC (or DC)

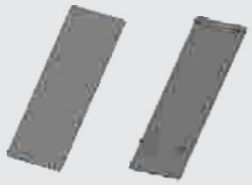
3. Installation bracket for the keypad

Installation bracket or M3 screw can be used in the installation of extertal keywad.
The bracket of 37–500kW inverters is standard
The bracket of 1.5–30kW inverters is optional

5. Optional parts

4. Heat–relaeasing Hole

Inverter needs to derate when selecting a cover Consult with the INVT technicians for the detailed information.



5. LCD keypad

10 rows of DH displaying
Compatible with the LED keypad

6. LED keypad

0.75~15kW optional

5. Optional parts

7. Reactor

（1）≥37kW support optional DC reactor
（2）350~500kW standard input reactor, others not

8. Dynamic braking system

≥ 37kW optional external braking unit

6. Applications

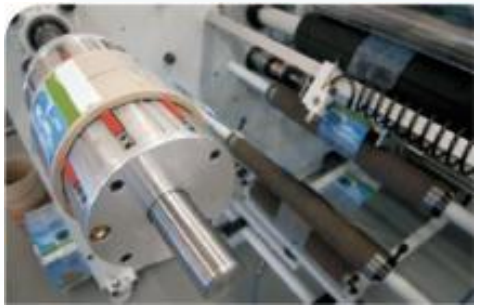
Fan

HVAC

Textile

Oil

Pump



Printing and packaging

6. Applications

Energy Saving

Ceramic machinery

Mining

Air compressor

CNC machine

Plastic machinery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