NVF5 Series Inverter Quick Start-Up Wizard

1.Safety Precautions

The purpose of this quick start-up wizard is to guide you to complete the basic installation、wiring and basic parameters setting、commissioning and troubleshooting for NVF5 series inverter products. For more information, please refer to the user manual or scan the QR code to get the user materials. This NVF5 series products have been strictly tested and packaged before leaving the factory. If abnormal information such as inverter damage and wrong delivery is found, please contact Chint channel or the relevant office or call Chint oversea hotline : 400-1177-797

Attention：

<table>
<tr><td rowspan="9">⚡
Danger</td><td>◇ It is not permitted to conduct unauthorized modification in case of the danger of fire/electric shock and other hurt！</td></tr>
<tr><td>◇ Installation must be conducted by qualified personnel in case of the danger of electric shock！</td></tr>
<tr><td>◇ Please install the inverter on the metal equipmen(supplementary enclosure) or other non-combustible objects in case of the danger of fire！</td></tr>
<tr><td>◇ It is not permitted to place combustibles nearby in case of the danger of fire!</td></tr>
<tr><td>◇ The products should be installed with either fuses or an input circuit breaker between the inverter and power supply in case of danger of fire!</td></tr>
<tr><td>◇ It is not permitted to install the inverter in an environemnt containing explosive gases in case of the danger of explosion!</td></tr>
<tr><td>◇ It is not permitted to insall the inverter at a place directly exposed in sunlight in case of the danger of equipment damage!</td></tr>
<tr><td>◇ It is not permitted to install the inverter on occasions where water splashing in case of the danger of equipment damage!</td></tr>
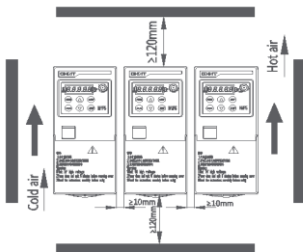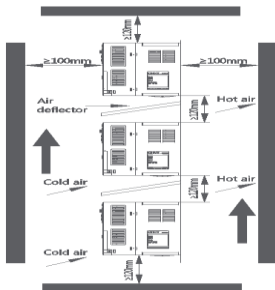</table>

Installation Dimensions：

Figure 1-1

Figure 1-2

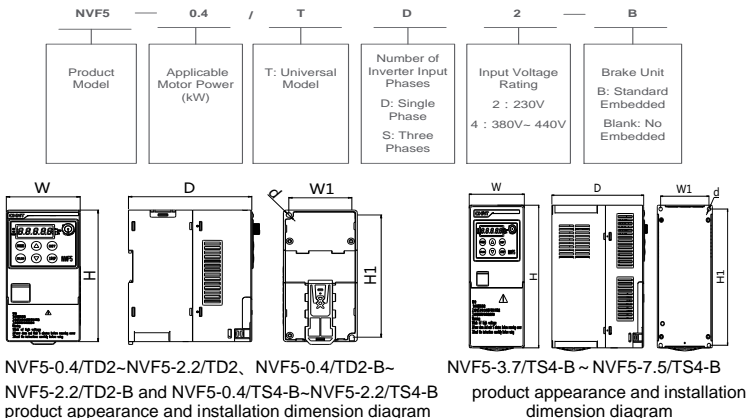## 2.Catalog Number Description、Product Models、Dimensions and Weights

NVF5	—	0.4	/	T	D	2	—	B
Product Model		Applicable Motor Power (kW)		T: Universal Model	Number of Inverter Input Phases D: Single Phase S: Three Phases	Input Voltage Rating 2 : 230V 4 : 380V~ 440V		Brake Unit B: Standard Embedded Blank: No Embedded

NVF5-0.4/TD2~NVF5-2.2/TD2、NVF5-0.4/TD2-B~
NVF5-2.2/TD2-B and NVF5-0.4/TS4-B~NVF5-2.2/TS4-B
product appearance and installation dimension diagram

Figure 2-1

NVF5-3.7/TS4-B ~ NVF5-7.5/TS4-B
product appearance and installation
dimension diagram

Figure 2-2

Catalog No.	Adaptive Motor kW	Output Current A	Brake Unit	Unit (mm)						Weight kg
				W	H	D	W1	H1	Mounting Hole d	
Single Phase AC 230V										
NVF5-0.4/TD2	0.4	2.5	Optional (embedded)	75	148	125.2	64	137.5	Φ5.3	1.2
NVF5-0.4/TD2-B										
NVF5-0.75/TD2	0.75	5								
NVF5-0.75/TD2-B										
NVF5-1.5/TD2	1.5	7.5								
NVF5-1.5/TD2-B										
NVF5-2.2/TD2	2.2	10		75	148	146.7	64	137.5	Φ5.3	1.25
NVF5-2.2/TD2-B										
Three Phase AC 380V~440V										
NVF5-0.4/TS4-B	0.4	1.5	Standard (embedded)	75	148	125.2	64	137.5	Φ5.3	1.03
NVF5-0.75/TS4-B	0.75	2.7								
NVF5-1.5/TS4-B	1.5	4.2								
NVF5-2.2/TS4-B	2.2	5.8								
NVF5-3.7/TS4-B	3.7	10.5		89.5	206	149.2	78.5	196.8	Φ5.5	1.79
NVF5-5.5/TS4-B	5.5	13								
NVF5-7.5/TS4-B	7.5	17		118	216	163.4	105	205	Φ6	2.78

3.Installation and Wiring
3.1 Power Terminal Description

（1）Single Phase 230V（NVF5-0.4/TD2～2.2/TD2 and NVF5-0.4/TD2-B～2.2/TD2-B）

NVF5-0.4/TD2～2.2/TD2 and
NVF5-0.4/TD2-B～2.2/TD2-B Power Terminal
Figure 3-1

（2）Three Phase380V（NVF5-0.4/TS4-B～7.5/TS4-B）

NVF5-0.4/TS4-B～7.5/TS4-B
Power Terminal
Figure 3-2

Terminal	Name	Description
R、S、T	Main Power Supply Input	The three-phase AC input terminals ,connecting with the power grid
L1、L2	Main Power Supply Input	The Single-Phase AC input terminals ,connecting with the power grid
U、V、W	Inverter Output	The three-phase AC output terminals ,connecting with the AC motor
⏚	Grounding	Grounding terminals,ensure reliable grounding
P+ P-	DC Bus Terminals	Single phase type DC+ and DC-
P B	Outer Brake Resistor Terminals	Three phase type brake resistor terminals
P+ B		Single phase type brake resistor terminals

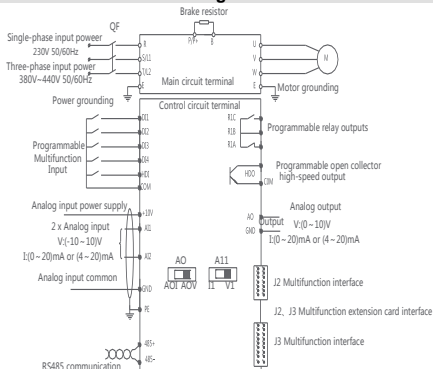**3.2 Power terminal and I/O terminal block diagram**

Figure 3-3

AO Dip Switch：Left，（0～20）mA or （4～20）mA Analog Current Ouput；Right，（0～10）V Analog Voltage Output.

AI1 Dip Swith：Left，（0～20）mA or （4～20）mA Analog Current input；Right，（0～10）VAnalog Voltage input.

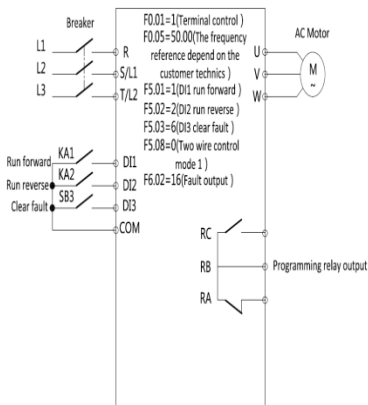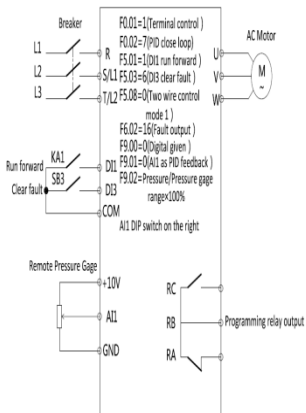AI2：Current Output need to be customized.

Wiring Demonstration：

Figure 3-4: Terminal start、Stop、Clear fault and Fault indication

Refer to the description of 6.2.7 of Chapter 6

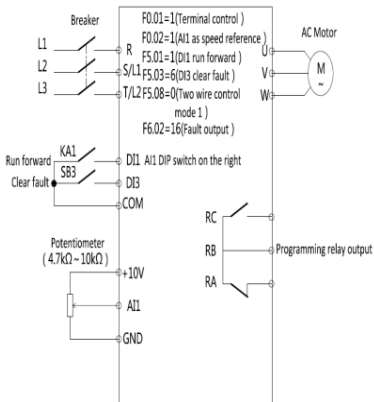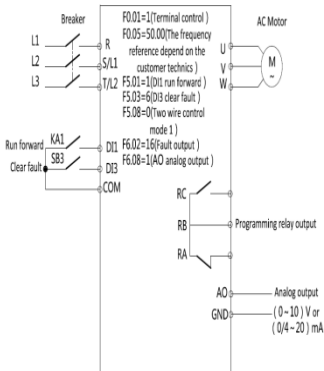Figure 3-5: PID constant pressure water supply control(Remote Pressure Gage)

Figure 3-6: Speed regulation by external potentiometer

AO Dip Switch：Left，（0～20）mA or（4～20）mA Analog Current Ouput

Right，（0～10）V Analog Voltage Output

Figure 3-7：（0～10）V Analog Voltage Output or（0/4～20）mA Analog Current Output

4.Integral Keypad
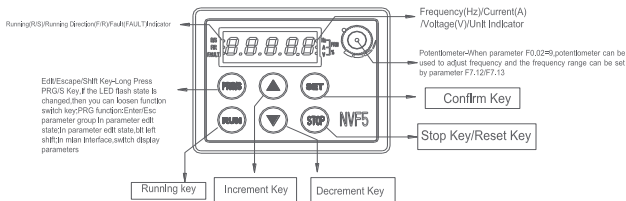
4.1 Integral Keypad and Indicators

Figure 4-1

4.2 Combination key Function Description

Key	Description	
PRG/S + SET	Parameter Menu Mode Selection（F7.11） 1、 Simple Parameter Menu Mode（U-1） 2、 Custom Parameter Menu Mode（U-2） 3、 Engineering Parameter Menu Mode（U-3）	
PRG/S + ▲	The system is under the main interface	Lock Combinational Key
	In custom menu mode,in menu level one	Add custom parameters
PRG/S + ▼	The system is under the main interface	Unlock Combinational Key
	In custom menu mode,in next level menu	Delete custom parameters

4.3 Parameter Menu Mode Demonstration

Simple parameter menu mode demonstration :

Below example is how to set parameter F0.05 from 5.00Hz to 10.00Hz in Simple Parameter Menu Mode.
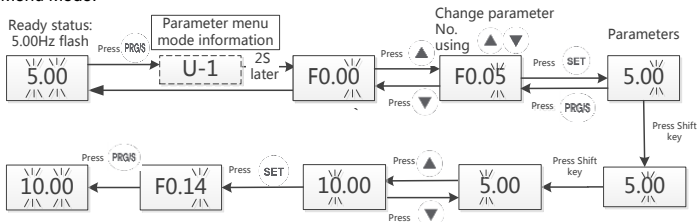

Figure 4-2 Simple Menu Mode Parameter Setting

5. Simple Parameter Menu and Commissioning Process

5.1 Simple Parameter Menu List

Code	Name	Attribute	Parameter Description	Default
F0.00	Motor Control Mode	◉	0：Sensorless Vector Control 1：Reserve 2：V/F Mode	0

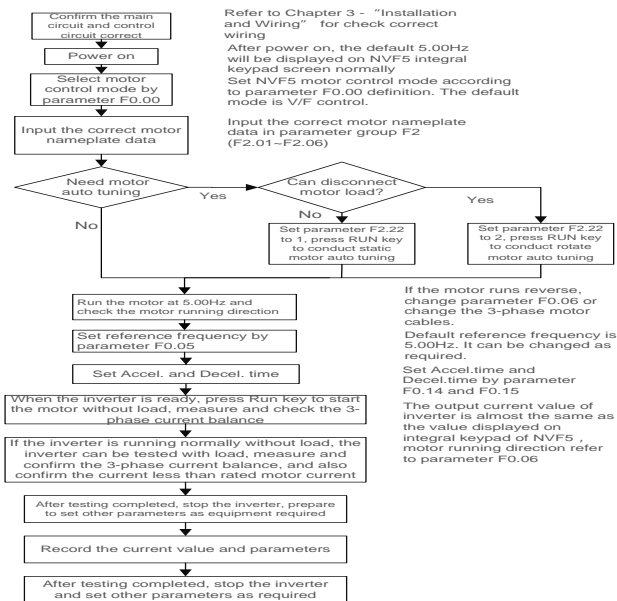|				
F0.01	Command Source	○	0：Integral Keypad 1：Digital Terminal 2：Communication 3：Remote Panel	0
F0.02	Main Frequency Reference	○	0：Digital Given 1：AI1 2：AI2 3：Reserve 4：High Speed Pulse HDI Reference 5：Preset Speed Reference 6：Simple PLC Reference 7：Close Loop PID Reference 8：Reserve 9：Potentiometer Reference	0
F0.05	Digital Given	○	F0.09-Min. Frequency～F0.08-Max. Frequency	5.00Hz
F0.14	Accelerate Time 1	○	（0.0～6500.0）s	Depend on Series
F0.15	Decelerate Time 1	○	（0.0～6500.0）s	Depend on Series
F0.20	Parameter Factory Default	●	0：No Effect 1：Fault Log Clear 2：Set to Factory Default（Except Motor NP Parameters and Parameter F7.11） 3：Reset Custom Parameter Group to Factory Default（Except Motor NP Parameters and Parameter F7.11） 4：All Parameter Reset to Factory Default 5：Back Up Parameters 6：Using Back Up Parameters 7：Saving Back Up Parameters Note：Only when you are using backup parameters,backup parameter are able to be saved.Otherwise when power off then re-power the inverter,except the updated parameters other parameters are always initial value.	0
F2.00	Motor Type	○	0：AC Induction Motor 1：Reserve 2：Reserve	0
F2.01	Motor NP Power	●	（0.1～1000.0）kW	Depend on motor type
F2.02	Motor NP Voltage	●	0V～Inverter Rated Voltage	Depend on motor type
F2.03	Motor NP Current	●	（0.1～1000.0）A	Depend on motor type
F2.04	Motor NP Frequency	●	0.01Hz～F0.07	Depend on motor type
F2.05	Motor Poles	●	2～24	4
F2.06	Motor NP RPM	●	（0～60000）rpm	1430rpm
F2.22	Motor Auto Tuning	●	0：No Operation 1：Static Tune 2：Rotate Tune	0
F7.11	Parameter Menu Mode	●	1：Simple Menu Mode 2：Custom Menu Mode 3：Engineering Menu Mode	1

Figure 5-1

6. Fault description and Trouble shooting

If a fault appears , Please see for an explanation of the fault code and check by yourself firstly before asking for help from Chint or Chint channels.When you need support,please contact Chint or Chint channels.

Code	Fault Type	Fault reason	Action
E.OC1	Inverter Accel. running overcurrent	Low grid voltage Directly and quickly start rotating motor	Check the input power supply Increase accel. time
E.OC2	Inverter Decel. running overcurrent	Incorrect Motor Nameplate Too small inverter power Unsuitable V / F curve Potential Energy Load or Big Inertial Load	Motor auto tuning Enlarge inverter power rate Adjust V/F cruve or adjust manual torque boost
E.OC3	Inverter constant speed running overcurrent	Accel./Decel. Time too short Load Fast Change	Add Regen. Brake Components Check load

E.OV1	Inverter Accel. running overvoltage	Motor short circuit to ground Abnormal input voltage	Check motor cable Check the input power supply Start inverter when motor stop Add Regen. Brake Components Increase decel. time Refer to Parameter Group F3 about how to set ASR
E.OV2	Inverter Decel. running overvoltage	Motor quick start again at high speed Potential Energy Load or Big Inertial Load Increase decel. time Incorrect setting of Parameter ASR in vector control Big Inertial Load	
E.OV3	Inverter constant speed running overvoltage		
E.SPI	Input Lose Phase	R.S.T lose phase	Checking Main Power Terminal Wiring Check Input Voltage Check Motor Cable Check Motor and Cable
E.SPO	Output Lose Phase	U.V.W lose phase	
E.FO	Power Module Protection	The output three-phase with interphase short circuit or ground short circuit Inverter instantaneous overcurrent Fan duct blockage or fan damage High ambient temperature Loose I/O wiring or plug Current waveform anomaly due to output lose-phase and other reasons Aux. power supply damage, drive voltage undervoltage IGBT Module Damage Control Board Abnormal	Re-wire, confirm the motor insulation See overcurrent handling Clear the fan duct or replace the fan Lower ambient temperature Check wiring and re-wire Checking wiring Asking for Chint technical support
E.OH1	Heat Sink Overheat	High ambient temperature Fan duct blockage Fan damage IGBT abnormal Temperature checking circuit error	Lower ambient temperature Clear the fan duct Replace the fan Asking for Chint technical support
E.OH2	Rectifier Bridge Overheat		
E.OL1	Motor Overload	Incorrect Motor Overload Ratio	Input correct motor overload ratio Check motor load
E.OL2	Inverter Overload	Motor Stall or load change frequently Long time low speed ruuning with excessive load Low grid voltage Unsuitable V / F curve Incorrect Motor Nameplate Excessive load Excessive DC Brake Accel. Time too short	Select Frequency conversion motor Check grid voltage Adjust V/F cruve or adjust manual torque boost Motor auto tuning Enlarge inverter power rate Reduce DC brake current, increase brake time Increase accel. time
E.tE	Auto Tuning	Set Wrong Motor Data Reverse Auto Tuning is prohibited in reverse running Poor contact of motor connecting cable Auto Tuning Overtime	Set correct motor data Disable Reverse Check motor cable Check Parameter F0.08 (Frequency Max.) whether is samller than rated frequency
E.StG	Motor short circuit to ground	Motor short circuit to ground	Check motor cable
E.LL	Load Loss Fault	Inverter Current is Smaller than the value of Parameter FE.18	Check whether load loss or parameter FE.17、FE.18、FE.19 parameter setting