NL1000

Micro & Economic

- Small Dimension, Low Cost
- Terminals Uncovered, Easy to Use and Wiring
- DIN-Rail Mounting and Wall Mounting
- Support MODBUS via RS485
- V/F Control; Buit-in PID Control
- Frequency Range 0.1...999.9Hz

Item			Specifications
	Power Supply	Rated Voltage	220 VAC, 50/60Hz, 1 Phase Input and 3 Phase Output 220 VAC, 50/60Hz, 1 Phase Input and 1 Phase Output 220 VAC, 50/60Hz, 3 Phase Input and 3 Phase Output 380 VAC, 50/60Hz, 3 Phase Input and 3 Phase Output
		Voltage Range	220 VAC 170-240 VAC 380 VAC 330-440 VAC
	Output	Voltage Range	220 VAC 0-240 VAC 380 VAC 0-380 VAC
		Frequency Range	0.10-999.9 Hz
	Control Mode		V/F Control, Space Vector Control
	Indication		Operating status/Alarm definition/interactive guidance: eg, frequency setting, the output frequency/ current, DC bus voltage, the temperature and so on.
Control Specification	Output Frequency Range		0.10-999.90 Hz
	Frequency Setting Resolution		Digital Input 0.1 Hz Analog Input 0.1% of Max. Output Frequency
	Output Frequency Accuracy		0.1 Hz
	V/F Control		Setting V/F Curve to Satisfy Various Load Requirements
	Torque Control		Auto Increase Auto raise Torque by Loading Condition Manual Increase Enable to Set 0.1-20.0% of Raising Torque
	Multi-Functional Output Terminal		One Multi-Fuction Output Terminal for Displaying of Running, Zero Speed, Counter, External Abnormity, Program Operation and Other Information and UP / DOWN Fuction and Emergency Stop and Other Functions.
	Multi-Functional Input Terminal		Four Multi-Fuction Input Terminals, Realizing Functions Including 15 Sections Speed Control, Program Running, 4 Section Acceleration / Deceleration Speed Switch, Warnings.
	Accel/Decel Time		0-999.9s Acceleration/Deceleration Time can be Set Individually
Others Functions	Frequency Setting		Analog input 0 to 10V, 0to 20mA can be Selected. Digital Input Input Using the Setting Dial of the Operation Panel or RS485 or UP/DOWN. Note AVI Terminals can be Used to Select an Analog Voltage Input (0-10V) and Analog Current Input (4-20mA) through the Switch J2.
	Multi-Speed		4 Multi-Fuction Input Terminals, 15 sections Speed can be Set
	Automatic Voltage Regulation		Automatic Voltage Regulation Function can be Selected
	Counter		Built-in 2 Group of Counters
Protection Function	Overload		150%, 60 s (Constant Torque)
	Over Voltage		Over Voltage Protection can be Selt.
	Under Voltage		Under Voltage Protection can be Set.
	Other Protections		Output Short Circuit, Over Current and Parameter Lock and so on.
Environment Installation	Ambient Temperature		-10 to 40˚C (Non-Condensing)
	Ambient Humidity		Max. 95% (No-Condensing)
	Altitude		Lower Than 1000m
	Vibration		Max. 0.5G
	Cooling Mode		Forced Air Cooling.
	Protection Class		IP20
	Installation Mode		Wall-Mounted or Standard 35mm Rail Mounting (Below 5.5kW)

NZ2000

General Purpose, Sensorless Vector Control

- Auto Identification, Simple to use
- PID Process Control, Multi-Function I/O
- Heavy Duty Use (3s 180%, 60s 150%)
- Support MODBUS, EtherCAT is selectable
- Power Range 0.4-280 kW
- Drives AC Induction Motor; Permanent Magnet Synchronous Motor is Selectable

Item		Specifications
Basic Function	Control Mode	V/F Control Sersorless Flux Vector Control, SFVC
	Max. Frequency	Vector Control 0.0-320.0 Hz V/F Control 0.1-3200 Hz
	Carrier Frequency	1.0 kHz-16.0 kHz The Carrier Frequency is Automatically Adjusted Based on the Load Features.
	Input Frequency Resolution	Digital Setting 0.01 Hz Analog Setting Max. Frequency x 0.025%
	Start Torque	G Type 0.5 Hz / 150%, SFVC P Type 0.5 Hz / 100%
	Speed Range	1:100, SFVC
	Speed Stability Accuracy	±0.5%, SFVC
	Overload Capacity	G Type 60s for 150% of the Rated Current, 3s for 180% of the Rated Current. P Type 60s for 120% of the Rated Current, 3s for 150% of the Rated Current.
	Torque Boost	Fixed Boost; Customized Boost 0.1%~30.0%
	Ramp Mode	Straight-Line Ramp; S-Curve Ramp Four Groups of Acceleration/Deceleration Time with the Range of 0.00-6500.0s
	DC Braking	DC Braking Frequency 0.00Hz~Maximum frequency Braking Time 0.0s~100.0s Braking Action Current Value 0.0%~100.0%
	JOG control	JOG Frequency Range 0.00 Hz-50.00 Hz JOG Acceleration/Deceleration Time: 0.0s~6500.0s
	Simple PLC, Multiple Preset Speeds	It Implements up to 16 Speeds via the Simple PLC Function or Combination of Terminal States
	Onboard PID	It Realizes Process Controlled Closed Loop Control System Easily
	Auto voltage regulation（AVR）	It Can Keep Constant Output Voltage Automatically when the Mains Voltage Changes
	Overvoltage / Overcurrent Stall Control	The current and voltage are limited automatically during the running process so as to avoid Frequent Tripping Due to Overvoltage/Over Current.
	Rapid Current Limit	It Helps to Avoid Frequent Over Current Faults of the AC Drive.
	Torque Limit and Control	It can Limit the Torque Automatically and Prevent Frequent Over Current Tripping During the Runing Process.
	High Performance	Control of Asynchronous Motor are Implemented Through the High-Performance Current Vector Control Technology.
	Running Command Channel	Given by the Panel, Control Terminals, Serial Communication Port, can be Switched by Many Ways.
	Frequency Source	There are Ten Frequency Sources. Digital Setting, Analog Voltage Setting, Analog Current Setting, Pulse Setting, Serial Port Setting. You can Perform Switchover Between these Sources in Various Ways.
	Auxiliary Frequency Source	10 kinds of Frequency Sorce, can be easlly reallze Micro Adjust, Frequency Synthesizer
	Timing Control	0.0-6500.0 min.
	Communication Methods	RS 485, EtherCAT is optional
Input & Output	Input Terminal	6 Digital Input Terminals, One of Which Supports up to 100 kHz High-Speed Pulse Input (Optional). 2 Analog Input Terminals, One of Which Only Supports 0-10V Voltage Input and the Other Supports 0-10V Voltage Input or 4-20mA Current Input.
	Output Terminal	1 Digital Output Terminal 1 Relay Output Terminal 1 Analog Output Terminal, That Supports 0-20mA Current Output or 0-10V Voltage Output
Others	Protection Function	Motor Shourt-Circuit Detection at Power-On, Output Phase Loss Protection, Over-Current Protection , Overheat Protection and Overload
	Key Locking and Function Selection	It can Lock the Keys Parlially or Completelly and Define the Function Range of Some Keys so as to Prevent Mis-Function.
	Protection Class	IP20

NZ8000

High Performance & Powerfull, Heavy Duty

- Various Control Version, V/F, Sensorless Vector and Cloosed Loop Vector Control
- Modbus RS 485, Profibus-DP, CANopen Communication Mode
- Flexible Programmable I/Os
- Heavy Duty 150% 60s, 180% 3s
- Wide Operating Voltage 220 to 690 VAC

	Item	Specifications
Basic Function	Control Mode	V/F Control Sersorless Flux Vector Control, SFVC Closed-Loop Vector Control, FVC, Above 3.7kW
	Max. Frequency	Vector Control 0.0-320.0 Hz V/F Control 0.0-3200.0 Hz
	Carrier Frequency	1.0 kHz-16.0 kHz The Carrier Frequency is Automatically Adjusted Based on the Load Features.
	Input Frequency Resolution	Digital Setting 0.01 Hz Analog Setting Max. Frequency x 0.025%
	Start Torque	G Type 0.5 Hz / 150%, SFVC; 0.0 Hz / 180%, FVC P Type 0.5 Hz / 100%
	Speed Range	1:100, SFVC / 1:1000, FVC
	Speed Stability Accuracy	±0.2%, SFVC / ±0.02%, FVC
	Torque Control Accuracy	±5%, Cloosed-Loop Vector Cotrol FVC Mode
	Overload capacity	G Type 60s for 150% of the Rated Current, 3s for 180% of the Rated Current. P Type 60s for 120% of the Rated Current, 3s for 150% of the Rated Current.
	Torque boost	Fixed Boost; Customized Boost: 0.1%~30.0%
	Ramp Mode	Straight-Line Ramp.; S-Curve Ramp; Four Groups of Acceleration/Deceleration Time with the Range of 0.00-6500.0s
	DC Braking	DC Braking Frequency 0.00Hz~Maximum frequency Braking Time 0.0s~100.0s Braking Action Current Value 0.0%~100.0%
	JOG control	JOG Frequency Range 0.00 Hz-50.00 Hz JOG Acceleration/Deceleration Time 0.0s~6500.0s
	Onboard Multiple Preset Speeds	It Implements up to 16 Speeds via the Simple PLC Function or Combination of Terminal States
	Onboard PID	It Realizes Process Controlled Closed Loop Control System Easily
	Auto voltage regulation（AVR）	It Can Keep Constant Output Voltage Automatically when the Mains Voltage Changes
	Overvoltage / Overcurrent Stall Control	The current and voltage are limited automatically during the running process so as to avoid Frequent Tripping Due to Over Voltage/Over Current.
	Torque Limit and Control	It can Limit the Torque Automatically and Prevent Frequent Over Current Tripping During the Runing Process. Torque Control can be Implemented in the FVC Mode.
Individualized Functions	High Performance	Control of Asynchronous Motor and Synchronous Motor are Implemented Through the High Performance Current Vector Control Technology.
	Rapid Dip Ride Through	The Load Feedback Energy Compensates the Voltage Reduction so That the AC Drive can Continue to Run for a Short Time
	Support for Multiple PG Card	Differential Input PG Card / Resolver PG Card / Rotating Transformer PG Card UVW Differential Input PG Card / OC Input PG Card
	Rapid Current Limit	It Helps to Avoid Frequent Over Current Faults of the AC Drive.
	Timing Control	0.0-6500.0 min.
	Communication Methods	Modbus (Standrad), Profibus-DP, CANopen
Running	Running Command Source	Operation Panel / Control Terminals / Serial Communication Port You can Perform Switchover Between these Sources in Various Ways.
	Frequency Source	Digital Setting, Analog Voltage Setting, Analog Current Setting, Pulse Setting, Serial Port Setting. You can Perform Switchover Between these Sources in Various Ways.
	Input Terminal	8 Digital Input Terminals, One of Which Supports up to 100 kHz High-Speed Pulse Input 2 Analog Input Terminal, One of Which Only Supports 0-10V Voltage Input and the Other Suppports 0-10V Voltage Input or 4-20 mA Current Input.
	Output Terminal	1 High-Speed Pulse Output Terminal (Open-Collector) that Supports 0-100kHz Square Wave Signal Output 1 Digital Output Terminal 2 Relay Output Terminal 2 Analog Output Terminal - that Supports 0-20mA Current Output or 0-10V Voltage Output.
	Protection Function	Motor shourt-circuit detection at power-on, output phase loss, over-current, overheat, under voltage and overload

ESD / ESD2

For Small Power AC Motors

- Mini Dimension, Low Cost
- Potentionmeter Knob to Covenient Adjust to Speed Regulation, Optimized Structure
- ESD2 series Support MODBUS via RS485
- V/F Control; 220V, Easy to use
- Frequency Range 1.0...99.0Hz/ 0.0...300.0Hz

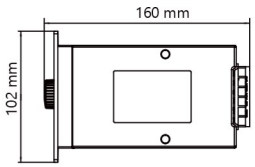
ESD2 Variable Speed Drives

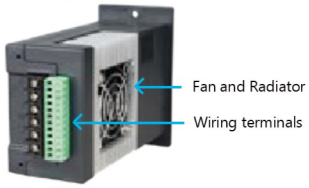
ESD2 series frequency inverter is a new generation micro power variable speed drive, specially designed for small power motor. Micro dimension, save installation space, instrument embedded structure, installation is simple and compact.

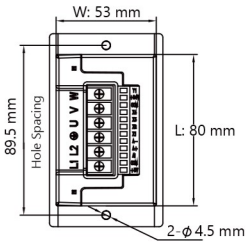
Advantage and Features

- Power range: 0.2~1.1 kW / 220V; V / F type control
- Input / output: single / three phase
- Output frequency range 0-300 Hz, analog input 0-5 V
- Carrier frequency up to 38.4 kHz
- Built-in MODBUS RS485, baud rate up to 9600 bps
- Forced air cooling
- Potentiometer knob to convenient adjust to speed regulation, optimized structure, forced air cooling
- Adopt a new generation I P M module with complete protection functions

DIMENSION





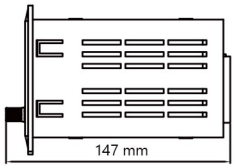


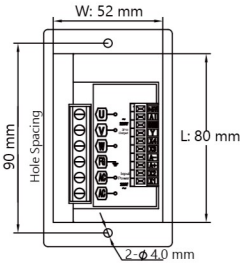
ESD Variable Speed Drives

ESD frequency inverter is embedded small power inverter, specially designed for small power motor. Small dimension, save installation space, instrument embedded structure, installation is simple and easy to use.

Advantage and Features

- Power range: 0.4~0.75 kW / 220V; V / F type control
- Input / output: single / three phase
- Output frequency range 1-99 Hz
- With speed adjust potential device, also can outer connect speed adjust potential device;
- Built-in MODBUS RS485, baud rate up to 9600 bps
- Interior configured intelligent logic controller can realize the simple, easy logic control function.
- With electric thermal electric relay function and other traditional motor protection device;
- Can outer connect LED for indicate, convenient for field use requirements;
- Humanization operating interface, simple and clear the parameters setting, convenient for operating;





Typical Applications

Suitable for electronic equipment, package equipments, wood cutting machine, transportation belt, wire drawing machine, etc.