AC TECH

AC DRIVES I PLC I HMI I SERVO SYSTEM I SOLAR DRIVE | CONTROL PANEL

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Micro Simple Inverter

NL1000+
Series AC Drive

NL 1000 Series Micro & Economic

- Micro size, low cost
- Terminals uncovered, easy for wiring
- DIN-rail mounting and wall mounting for installation
- Supports MODBUS via Rs485
- Maintenance-free
- V/F control; Built-in PID control, frequency range 0.1~400Hz

Power Range

220V / 0.75 ~ 4 kW (1 hp to 5 hp)
380V / 0.75 ~ 4 kW (1 hp to 5 hp)

Technical Specification

	Items	Specification
Control Specifications	Output Frequency Range	0.10HZ~400.00Hz / 0.1Hz
	Frequency Setting Resolution	Digital input : 0.1 Hz, analog input: 0.1% of maximum output frequency
	Output Frequency Accuracy	0.1Hz
	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 0.0-20.0% of raising torque.
	Multifunctional Input Terminal	Four multi-function input terminals, realizing functions including fifteen section speed control, program running, four-section acceleration/deceleration speed switch, UP/DOWN function and emergency stop and other functions
	Multifunctional Output Terminal	1 multi-function output terminals for displaying of running, zerospeed, counter, external abnormity, program operation and other information and warnings.
	Acceleration/ deceleration Time Setting	0-999.9s acceleration/deceleration time can be set individually.
Other Functions	PID Control	Built-in PID Control
	Rs485	Standard RS485 communication function (MODBUS)
	Frequency Setting	Analog input:0 to 10V, 4 to 20mA can be selected; Digital input: Input using the setting dial of the operation panel or RS485or UP/DOWN. Note: AVI terminals can be used to select an analog voltage input (0-10V) and an analog current input (4-20mA) through the switch J2.
	Multi-speed	Four multifunction input terminals, 15 section speed can be set
	Automatic voltage regulation	Automatic voltage regulation function can be selected
	Counter	Built-in 2 group of counters
Protection/ Warning Function	Overload	150%, 60second (Constant torque)
	Over Voltage	Over voltage protection can be set.
	Under Voltage	Under voltage protection can be set.
	Other Protections	Output shortcircuit, over current, and parameter lock and so on.

SMART SERIES
Digital External Keypad
For **NL1000+** Model

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AC DRIVES I PLC I HMI I SERVO SYSTEM I SOLAR DRIVE

NL 2400 Series Compact Vector Control

- Senseless flux vector control (VC), V/F (Voltage/Frequency) control
- Overload Capacity is 150% (100%) of the rated current, 3s for 180% of the rated current
- There are ten auxiliary frequency sources. It can implement fine tuning of auxiliary frequency & frequency synthesis

Power Range
415V / 0.75 ~ 250kW (1 hp to 335 hp)

Technical Specification

	Items	Specification
Standard Functions	Control Mode	V/F (Voltage/Frequency) Control Senseless flux vector control (VC)
	Maximum Frequency	Vector Control: 0-300 Hz; V/F Control: 0-3200 Hz
	Carrier Frequency	1.0-16.0 kHz; The Carrier frequency is automatically adjusted based on the load features.
	Input Frequency Solution	Digital Setting: 0.01 Hz Analog Setting: 0.025% of maximum frequency
	Startup Torque	G type: 0.5 Hz/150% (VC) P type: 0.5 Hz/100% (VC)
	Speed range / stability accuracy	1:100 (VC) / $\pm$ 0.2% (VC)
	Torque Control Accuracy	$\pm$ 20%
	Overload Capacity	G type: 60s for 150% of the rated current, 3s for 180% of the rated current.
	Torque Boost	Auto Boost Customized Boost 0.1% -30.0%
	V/F curve	Line V/F Curve Multi-point V/F Curve N-power V/F Curve (1.2-power, 1.4-power, 1.6 power, 1.8 power, square)
	V/F Separation	Two Types: complete separation; half separation
	Ramp Mode	Straight-line Ramp; S-curve ramp Four groups of acceleration/deceleration time with the range of 0.0-6500.0s
Standard Functions	DC Braking	DC Braking Frequency: 0.00Hz to maximum frequency Braking Time: 0.0-100.0s; Braking action current value: 0.0%-100.0%
	JOG Control	JOG frequency range: 0.00-50.00 Hz JOG acceleration/deceleration time: 0.0-6500.0s
	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-contolled closed loop control system easily.
	Auto Voltage Regulation (AVR)	It can kep 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 overvolatge/over Current.
	Torque limit & control	It can limit the torque automatically and prevent frequent over current tripping during the running process
	Power dip ride through	The load feedback energy compensates the voltage reduction so that the AC drive can continue to run for a short time.
	Rapid Current Limit	It helps to avoid frequent over current faults of the AC drive.
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	High Performance	Control of asynchronous motoris implemented through the high performance current vector technology
	Timing Control	Time range: 0.0-6500.0 minutes
	Communication methods	Rs485 (MODBUS-RTU)
	Protection mode	Motor short-circuit detection at power-on, input/output phase loss protection, over current protection, overvolatge protection, under voltage protection, overheat protection and overload protection.
Input and Output	Input terminal	6 Digital Input Terminals, one of which supports up to 100 kHz high-speedpulse input. 2 analog input terminals, one of which only supports 0-10 V voltage input and the other supports 0-10 V voltage input or 4-20 mA current input.
	Frequency Source	Digital Setting, Analog voltage setting, analog current setting, pulse setting and serial communication port setting
	Auxiliary Frequency Source	There are ten auxiliary frequency sources. It can implement fine tuning of auxiliary frequency and frequency synthesis.
	Running Command Source	Operation panel/Control terminals/Serial communication port. You can perform switchover between these sources in various ways.
	Output Terminal	1 Digital output terminal; 1 relay output terminal 1 analog output terminal :that supports 0-20 mA current output or 0-10 V voltage output
Keyboard	LED Display	It displays the parameters.
	Key Locking and function selection	It can lock the keys partially or completely and define the function range of some keys so as to prevent mis-function.
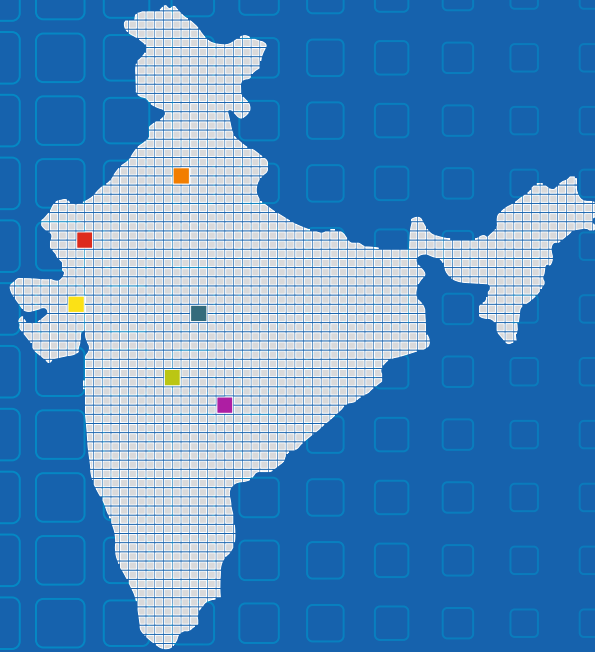
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