

# Opening Unseen Worlds of Motion Control

## N500 AC DRIVE



### Features

- Powerful control strategy with V/f control, sensorless vector control and closed loop vector control.
- Built-in PID controller for closed loop operation
- Oscillation-less low speed precise performance
- Multi speed operation function
- Pretest by simulation function according to the load classification
- Automatic Voltage Regulator (AVR) function
- Two stage acceleration / deceleration function
- MMI(Man-Machine Interface) function using RS485 communication
- Trip tracking data save
- LCD digital operator

### Optional Features

- EMI / RFI filter
- LCR filter
- Dynamic braking unit
- Regenerative braking unit
- DC reactor
- AC reactor ( input /output)
- Connection cable ICS-3 (3m )

# N500 AC DRIVE

(1) N500 Standard Model (CT-TYPE)				(2) N500-P Economical Model(VT-TYPE)					
Model (N500 - □□□□HF)	1600HF	2200HF	2800HF	3500HF	2000HFP	2800HFP	3200HFP	3800HFP	
Maximum applicable motor(4P, KW)	160	220	280	350	200	280	320	380	
Rated capacity(KVA)	400V	232	318	400	500	-	-	460	500
Rated input power	3 Phase(3-wire) 380 ~ 480V ±10%, 50Hz / 60Hz				3 Phase(3-wire) 380 ~ 480V ±10%, 50Hz / 60Hz				
Rated output voltage	3 Phase(3-wire) 380 ~ 480V ( According to supply voltage )				3 Phase(3-wire) 380 ~ 480V ( According to supply voltage )				
Rated output current(A)	304	418	525	656	397	532	616	732	
Starting torque	200%, 0.5Hz								
Output frequency range (Hz)	0~400 Hz				0~400 Hz				
Overload capacity	150% for the 60 seconds				120% for the 60 seconds				
Regenerative braking	Braking Unit (Optional)				Braking Unit (Optional)				
Weight (Kg)	200		215		200		215		
Size (Included Lift Angle size)	900x670x380	1080x650x380	1150x800x380		900x670x380	1080x650x380	1150x800x380		
<b>(3) Common Specifications</b>									
Model (N500 - □□□□HF□)	Specifications								
Voltage Modulation method	SVPWM(Space Vector PWM)								
Frequency accuracy	Digital : ±0.01% of maximum frequency, Analog : ±0.2%( 25±10°C)								
Frequency resolution	Digital setting : 0.01Hz, Analog setting : Maximum frequency/4,000( 0-L : 12bit/0~10V, 02-L : -10~+10V )								
voltage/frequency characteristic	V/f Control(Constant torque and reduced torque), Sensorless vector control, Sensored vector control								
Accel/Decel time	0.01 ~ 3,600seconds ( Linear/curve selection)								
Digital I / O	Multi-function digital input 8 channel, multi-function open collector output 5 channel, multi-function C contact output 2 channel								
Analog I / O	Voltage / current output 2 channel, pulse output 1 channel								
Input Signals	Frequency setting	Operator	Set by UP / DOWN key						
		External signal	DC0 ~ 10V, -10V ~ +10V(Input impedance 10kΩ), 4~20mA(Input impedance 100Ω)						
		External post	Set by RS485/232						
	Forward/Reverse RUN/STOP	Operator	FWD(Forward)/REV(Reverse) key						
External signal		FWD/REV run(N.O./N.C. contact)							
External post		Set by RS485/RS232 communication							
Intelligent input terminals	Selectable 8 intelligent terminal : FWD(Forward Run command), REV(Reverse Run command), CF1~CF4(Multi-stage operation 1~4), JOG(Jogging), DB(External DC Braking), 2CH(2-stage accel/decel), FRS(Free run stop), EXT(External trip), USP (Unattended start protection), CS(Change to/from commercial power supply), SFT(Software lock), AT(Analog input selection), RS(Reset), PID(PID on/off), PID_C(PID reset), UP(Remote controlled accel.), DOWN(Remote controlled decel.), UDCLR(Remote controlled data clearing)								
	Thermister input terminal	One terminal( PTC characteristic)							
Output Signals	Intelligent input terminals	Five open collector terminals and two relay output selectable : RUN(Run signal), FA1(Frequency arrival signal at the constant speed), FA2(Frequency arrival signal above the set frequency), OL(Overload advance notice signal), OD(Output deviation for PID control), AL(Alarm signal), FA3(frequency arrival signal only at the set frequency), IPS(Instantaneous power failure signal), THM(Thermal alarm)							
	Monitor output terminals	Analog voltage, Analog current, Pulse line output							
Display monitor	Output frequency/current/voltage, Motor rotational speed, terminal status, output power, time, trip history								
Etc.	V/f free setting(7-point), frequency limit, frequency jump, auto/manual torque boost, analog meter setting, start frequency, carrier frequency, electronic thermal, external frequency input via start/end, analog input selection, retry after trip, restart after instantaneous power failure, overload restriction, AVR function, auto-tuning, deceleration and stop power failure								
Carrier frequency setting	2~4kHz								
Protection functions	over current/voltage protection, under voltage protection, electronic thermal, over temperature, ground fault, instantaneous power failure, USP error, phase failure protection, IGBT error, external trip, communication error								
environmental conditions	Ambient operating/storage temperature /humidity	-10 ~ 50°C /-20~65°C/ 20 ~ 90% RH(Non-condensing)							
	Vibration	2.94m/s <sup>2</sup> ( 0.3G ), 10 ~ 55Hz( 22KW )							
	Location	Less than 1,000m of altitude, indoor( no corrosive gas nor gust)							
Color	Gray(Munsell 8.5 YR 6.2/0.2)								
Protection class	IP20(NEMA1)								
Option	Cable	Connection cable ICS-3(3m)							
	Etc	AC reactor(input/output), DC reactor, EMI filter, Radio noise filter, Braking unit, Braking resistor, LCR filter							

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