Top 100
Global
Innovator
for 10 years

Xmotion
iX7NH Series

Xmotion

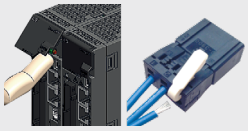
iX7NH Series

User-oriented Xmotion Servo Systems Complete Your Optimal Solution.

Servo Drives Part Numbering System

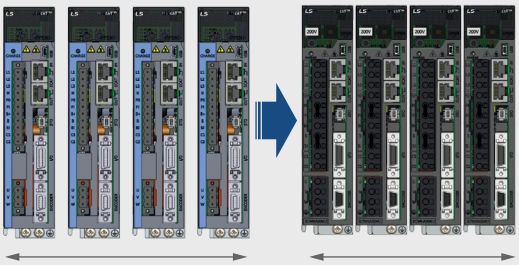
iX7	NH	A	004	U	AA
	Type of Interface	Nominal Input Voltage	Rated Output Power	Type of Encoder	Component Option
	Network Type	A: 200VAC	001: 100W 002: 200W 004: 400W 008: 750W 010: 1.0kW 020: 2.0kW 035: 3.5kW	U: Universal	Blank: Standard Product Unblank: Contact LS ELECTRIC for Details

Next Generation EtherCAT Network Command Type iX7NH



Efficient Utilization of Space & Ease of Use

- Optimized installation space by highly efficient heat dissipation
  - 100W ~ 1kW Drive
- Minimized drive depth for 100W and 200W drive by development and application of mini heatsink
  - 172.5mm → 145.2mm ; volume reduced by 16%
- Parameter display: easy to open and close
- Spring clamp connector applied for easier wiring



L7NH Series, when operating temperature/ load is high

182mm

When ambient temperature is between 0°C and 45°C

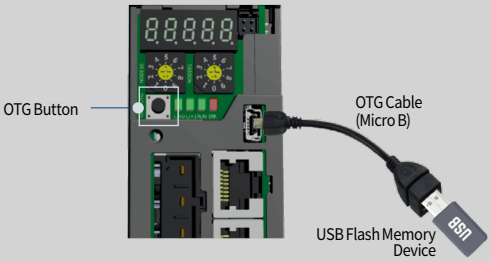
155mm

Based on 400W

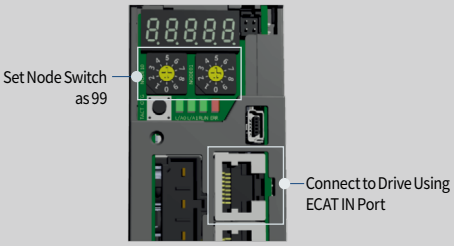
More Variety of Supported Encoders & Enhanced Control Functionalities

- More types of encoders supported on top of high resolution encoder
  - BiSS, Quadrature, Tamagawa, Panasonic, EnDat 2.2, SSI, Nikon and Sinusoidal (optional)
- Temperature monitoring by encoders supported
- Enhanced disconnection check function of quadrature encode
  - Disconnection check circuit added
  - No dummy wiring needed
- Improved control cycle times
  - Position: 125 µs
  - Speed: 62.5 µs
  - Current: 31.25 µs
- Enhanced alarm trace function
  - Capable of saving up to 4 maximum channels such as alarm code & alarm occurrence time/ date
- Enhanced USB OTG(On-The-Go) function
  - Back-up & restoration of drive parameters (drive ↔ USB device)
  - Back-up of drive's alarm history (drive → USB device)
  - Firmware update (drive ← USB device)

When Using USB OTG

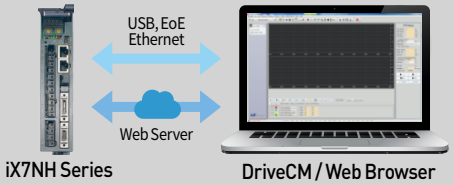


When Using Modbus TCP



Faster Communication Provided in More Diverse Methods

- Fieldbus: EtherCAT & Modbus TCP
- Min. Communication Cycle time
- Advanced EtherCAT functionality
  - Minimum communication cycle time improved to 0.125 ms from 0.250 ms
  - FoE function supported
- Built-in web server function
  - With web server embedded in servo drive, no DriveCM (configuration software) is needed other than web browser environment



iX7NHA Drive

Item \ Part Number		iX7NHA001U	iX7NHA002U	iX7NHA004U	iX7NHA008U	iX7NHA010U	iX7NHA020U	iX7NHA035U
Input Power	Main Power	1-Phase AC100 ~ 120[V], 1-Phase AC200 ~ 240[V], 3-Phase AC200 ~ 240[V], (-15 ~ +10[%]), 50 ~ 60[Hz]			1-Phase AC200 ~ 240[V], 3-Phase AC200 ~ 240[V], (-15 ~ +10[%]), 50 ~ 60[Hz]	3-Phase AC200 ~ 240[V], (-15 ~ +10[%]), 50 ~ 60[Hz]		
	Control Power	1-Phase AC100 ~ 120[V] 1-Phase AC200 ~ 240[V] (-15 ~ +10[10%]), 50 ~ 60[Hz]			1-Phase AC200 ~ 240[V] (-15 ~ +10[10%]), 50 ~ 60[Hz]			
Rated Current [A]		1.4	1.7	3.0	5.2	6.75	13.5	16.7
Peak Current [A]		4.9	5.95	10.5	18.2	20.25	40.5	50.1
Encoder Type		Quadrature (Incremental) , BiSS-B, BiSS-C(Absolute, Incremental) Tamagawa Serial(Absolute, Incremental), EnDat 2.2, Sinusoidal, Analog Hall, SSI, Nikon, Panasonic						
Control Performance	Speed Control Range	Max. 1 : 5000						
	Speed Variation Ratio	±0.01[%] or less (Load variation 0~100[%]), ±0.1[%] or less (temperature: 25±10[°C])						
	Torque Control Repetition Accuracy	±1[%] or less						
EtherCAT Specification	Communication Standard	FoE (Firmware download) EoE (Parameter setting by UDP, Tuning, Secondary function, Parameter copy) CoE (IEC 61158 Type12, IEC 61800-7 CiA 402 Drive profile)						
	Physical Layer	100BASE-TX(IEEE802.3)						
	Connector	RJ45 x 2						
	Communication Distance	Distance between nodes 100[m] or less						
	DC (Distributed Clock)	Synchronization by DC(Distributed Clock) mode. Minimum DC cycle: 125[us]						
	LED Display	Link Act IN, Link Act OUT, RUN, ERR						
	CiA 402 Drive Profile	Profile Position Mode, Profile Velocity Mode, Profile Torque Mode, Cyclic Synchronous Position Mode Cyclic Synchronous Velocity Mode, Cyclic Synchronous Torque Mode, Homing Mode						
Digital Input & Output	Digital Input	Input Voltage range: DC 12[V] ~ DC 24[V] / Total 6 input channels (allocable) Inputs of total 15 functions are selectively allocable (*POT, *NOT, *HOME, *STOP, *PCON, *GAIN2, P_CL, N_CL, PROBE1, PROBE2, EMG, A_RST, SV_ON, LVSF1, LVSF2) Note)* Automatically allocated signals						
	Digital Output	Service rating: DC 24[V] ±10%, 120[mA] total 3 channels (allocable) Total 11 outputs are selectively allocable (*BRAKE±, *ALARM±, *READY±, ZSPD, INPOS, TLMT, VLMT, INPOS2, INSPD, WARN, TGON) Note)* Automatically allocated signals						
Encoder Decimation Output		Differential Line Driver 3 channels AO, /AO, BO, /BO, ZO, /ZO up to 6.5 [Mpps] on 4x interpolation						
Analog Input & Output	Analog Input	Input voltage range: -10 ~ +10[V], Function: analog torque limit (1 channel, unallocable)						
	Analog Output	Total 2 channels (Allocable): able to selectively allocate total 25 types of output						
Safety Function		2 Input Channels(STO1 and STO2), 1 Output Channel(EDM)						
USB Communication	Function	Firmware download, Parameter setting, Tuning, Parameter copy						
	Communication Standard	Conforming USB 2.0 Full Speed and OTG 2.0 standard						
	Accessible Device	PC or USB Storage device						
Embedded Function	Dynamic Braking	Standard built-in brake (Activated when the servo alarm goes off or when the servo is off).						
	Regenerative Braking	Default built-in (Except 100W & 200W), external installation possible						
	Display Function	7 segments(5DIGIT)						
	Self-setting Function	Drive node address setting is possible using rotary switch						
	Additional Function	Gain tuning, alarm history, jog operation, home searching						
	Protection Function	Overcurrent, overload, overheat, overvoltage, insufficient voltage, overspeed, abnormal state of encoder, position following error, current detecting error						
Operation Environment	Operating Temperature / Storage Temperature	0 ~ +50[°C] / -20 ~ +65[°C]						
	Operating Humidity / Storage Humidity	Below 80[%]RH / Below 90[%]RH(avoid dew-condensation)						
	Environment	Indoor, avoid corrosive, inflammable gas or liquid						

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