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Integrated Motor Drive System vs. Conventional Servo System

Multi-axis machinery and industrial automation made easier. Doing speed, position and torque closed-loop control with separate brushless motor and driver/controller technologies can be challenging. Our integrated motor controllers provide easier set-up, smaller and cleaner motion control solutions. By keeping the wiring from the motor to the driver short, integrated motor controllers are the perfect solution for reducing the communication time for the signals from the drivers to the motors. Our integrated motor controllers include state-of-the-art 4096 lines encoder and CANOpen network protocols in an intelligent plug-and-play package.

Due to the built-in current limiting, the drives are safeguarded against thermal overload. Fewer components mean better reliability and the 16kHz current loop for precise, smooth & quiet sinusoidal commutation with Field Oriented Control (Vector Control). With the elimination of multiple components, connectors, cabling, and labor a significant cost savings is also realized.

Integrated motor controller versus separate motor and drive? A case can be made that the time saved by using integrated solutions

is more cost efficient and easier without compromise on performance to separated motor – driver solutions.

Experience the benefits of an Integrated Motor Controller

- › **Easier set-up**
- › **Compact motion control solution**
- › **Faster response time between components**
- › **Protection against thermal overload**
- › **Improved reliability**
- › **Cost efficient system**

Robotics and Industrial Automation Applications

- › **Smart Industrial Automation**
- › **Collaborative Robotic Arms**
- › **Laboratory Testing Equipment**
- › **Multi-Axis Machinery**
- › **Warehouse Automation Systems**

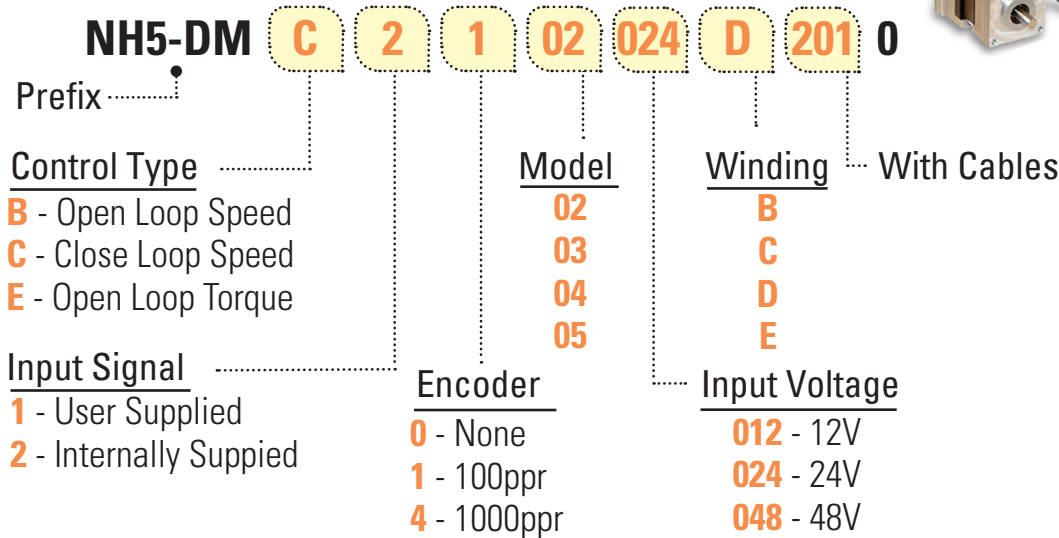
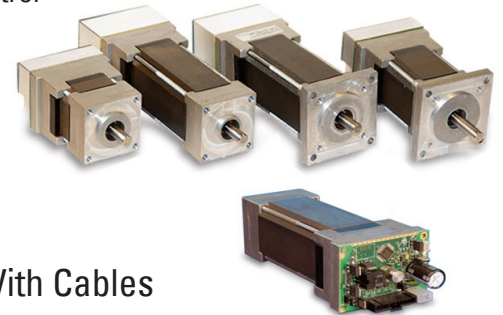
Integrated NEMA 23 Dynamo BLDC

The **NH5-DM... Series** is an economical turn-key solution to speed and torque analog motion control

- Compact integral BLDC controller match and pre-setup to NH1-DMA0 NEMA Brushless Motor
- 100% tested and ready to use
- Available in open and closed loop speed control and open loop torque control
- Included 24 inches long power and control cables assemblies
- UL approve for smooth and precision control



SETTING IDEAS INTO MOTION



SDP/SI Part Number	Voltage Vdc	Control Type			Input Signal Analog 5Vdc		Encoder	Model	Winding	Rated Torque		Cables
		Open Loop Speed	Closed Loop Speed	Open Loop Torque	User Supplied (35 mA max)	Internally Supplied (5 mA max)				oz-in	mN • m	
NH5-DMC2102024D2010	24		•				100ppr	02	D	10	70.6	•
NH5-DMB2103024E2010	24	•					100ppr	03	E	20	141.2	•
NH5-DMC2105024B2010	24		•				100ppr	05	B	40	282.5	•
NH5-DMB1405012C2010	12	•			•		1000ppr	05	C	40	282.5	•
NH5-DMC2104024B2010	24		•				100ppr	04	B	30	211.8	•
NH5-DME1405012C2010	12			•	•		1000ppr	05	C	40	282.5	•
NH5-DMB2105024D2010	24	•				•	100ppr	05	D	40	282.5	•
NH5-DMB1002024B2010	24	•			•		—	02	B	10	70.6	•
NH5-DMB1002024D2010	24	•			•		—	02	D	10	70.6	•
NH5-DMB1003024B2010	24	•			•		—	03	B	20	141.2	•
NH5-DMB1003024D2010	24	•			•		—	03	D	20	141.2	•
NH5-DMB1004024B2010	24	•			•		—	04	B	30	211.8	•
NH5-DMB1004024D2010	24	•			•		—	04	D	30	211.8	•
NH5-DMB1005024E2010	24	•			•		—	05	E	40	282.5	•
NH5-DMB1105024B2010	24	•			•		100ppr	05	B	40	282.5	•
NH5-DMB2004048D2010	48	•				•	—	04	D	30	211.8	•
NH5-DME1105024E2010	24			•	•		100ppr	05	E	40	282.5	•

60 mm Frame Integrated Servo Motor and Drive with CANbusC

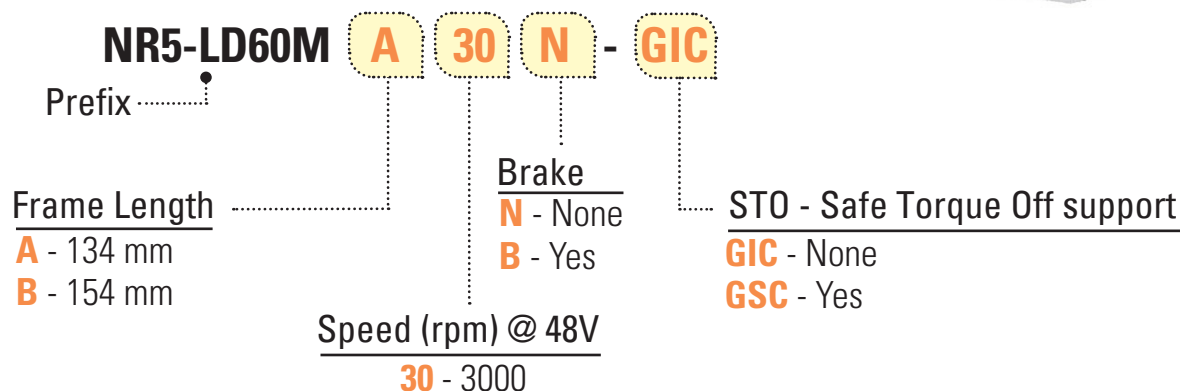
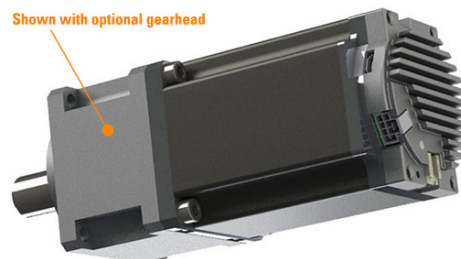


STOCK DRIVE PRODUCTS/STERLING INSTRUMENT

SETTING IDEAS INTO MOTION

The high performance **NR5-LD60... Series** incorporates motor, encoder and drive into a space-saving unit that is ready to install and use out of the box. Easily customize features and functionality with built-in scripting language.

- Low voltage, 12 – 70 Vdc operation 100% tested and ready to use
- Built-in, miniature three-phase motor controller
- Fast, 16 kHz current loop for precise control
- Integrated encoder 4096 cpr
- Multiple CANBus protocol support
- Easy configuration, tuning and monitoring using provided PC utility



SDP/SI Part Number	Stack Length A & B (mm)	Power W	Motor Speed @ 48V	Brake	STO - Safe Torque Off support	Rated Torque Nm
NR5-LD60MA30N-GIC	134	300	3000	No	No	0.64
NR5-LD60MA30B-GIC	134	300	3000	Yes	No	0.64
NR5-LD60MA30N-GSC	134	300	3000	No	Yes	0.64
NR5-LD60MA30B-GSC	134	300	3000	Yes	Yes	0.64
NR5-LD60MB30N-GIC	154	400	3000	No	No	1.28
NR5-LD60MB30B-GIC	154	400	3000	Yes	No	1.28
NR5-LD60MB30N-GSC	154	400	3000	No	Yes	1.28
NR5-LD60MB30B-GSC	154	400	3000	Yes	Yes	1.28

Engineered Motion Solutions by SDP/SI

SDP/SI is a leading manufacturer of precision gears and superior mechanical components for robotics and automation applications. With over 70 years of experience we provide problem solving solutions – from gearing and actuation to motors, drives, and controls. With over 87,000 standard component options and custom capabilities we look forward to meeting your motion needs.

Let's Set Your Project into Motion

Contact SDP/SI to discuss your application and how we can help set your ideas into motion!

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