

# Dynamo® Motors

## NT DYNAMO® Brushless DC (BLDC) Motors



**Torque Range (Continuous):** 10 – 50 oz-in

**Speed Range:** Up to 6000 RPM at 48V

**Mounting:** Size 17 and NEMA 23

**Rated Voltages:** 12Vdc – 48Vdc

**Encoder Options:** 100 – 1000 line available

**Power:** Up to 200 Watts (Higher ratings available upon request)

### Product Features:

- Integral Motor Controls Matched to Motor Winding
- 2 or 4 Quadrant Operation
- Ultra Smooth Precision Motion Quality
- Neodymium Ring Magnets (not arcs)
- Stainless Steel Shaft
- Over 20,000 Hours of Design Life @ Rated Torque
- Long Life Ball Bearing System

### Product Overview and Options

#### The NT DYNAMO® is designed to provide:

- Maximum application flexibility
- Increased reliability
- Compact integrated encoder option
- 4 quadrant closed loop or 2 quadrant open loop
- Operates in speed or torque mode

#### Typical Applications:

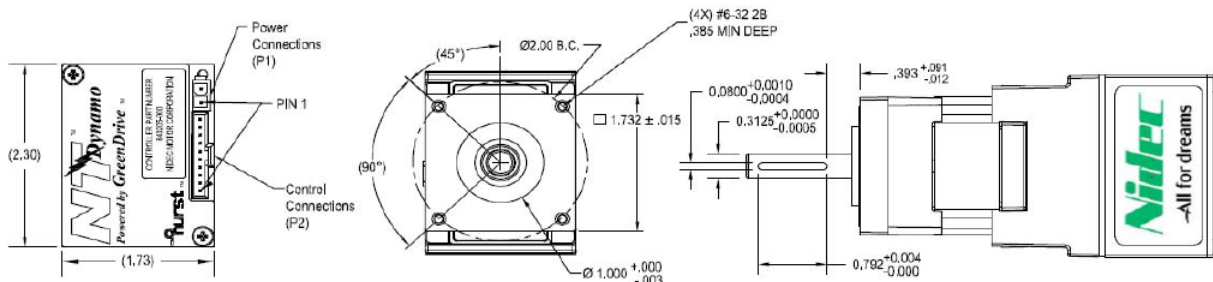
- AGV applications
- Robotics
- Indexing and positioning
- Feature Linear Actuation

Dynamo® Motors

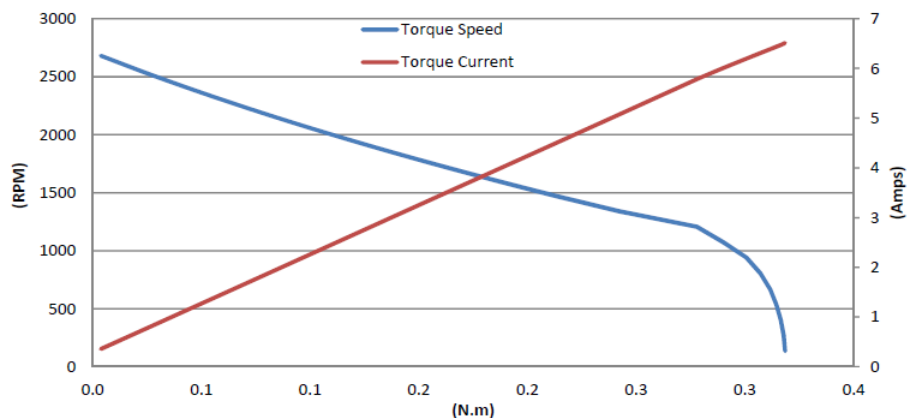


### Nidec Dynamo® – FIRST® Robotics Competition Model Specific Performance Data Sheet AndyMark # AM-3740 – Nidec Model # DM3012-1063

Model#	DM3012-1063	Controller Type:	Green Drive	Encoder PPR:	0	Amb. Temp. (°C):	22	Date:	08/09/2017				
<b>Speed / Torque Test Data - Control set at 100% duty cycle.</b>													
Rated Speed	Rated Current	Rated Power	Rated Torque	No Load Speed	No Load Current	Peak Torque	Peak Current	Voltage Constant	Torque Constant	L-L Resistance	L-L Inductance	Rotor Inertia	Voltage
RPM	Amp	Watt	Oz.in	RPM	Amp	Oz.in	Amp	V/kRPM	oz.in/Amp	Ohms	mH @ 1Khz	oz.in.sec <sup>2</sup>	Volts
1700	4.00	44.00	20.00	2700.00	0.28	45.00	6.50	3.89	5.26	0.67	0.66	0.0013	12.00



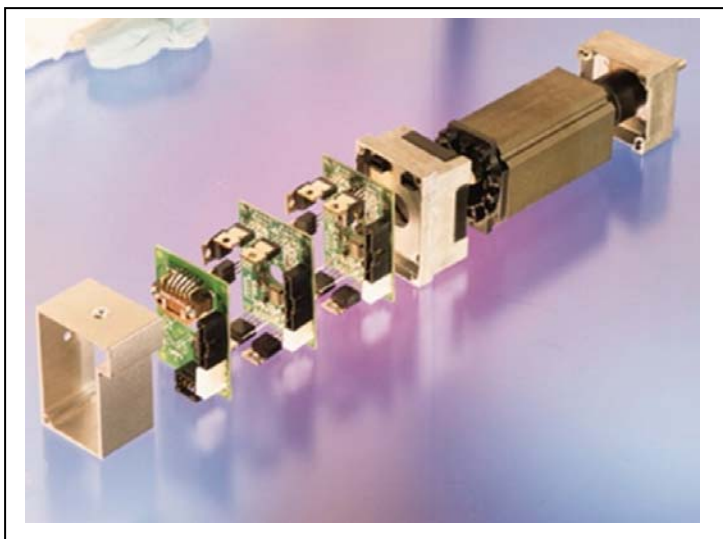
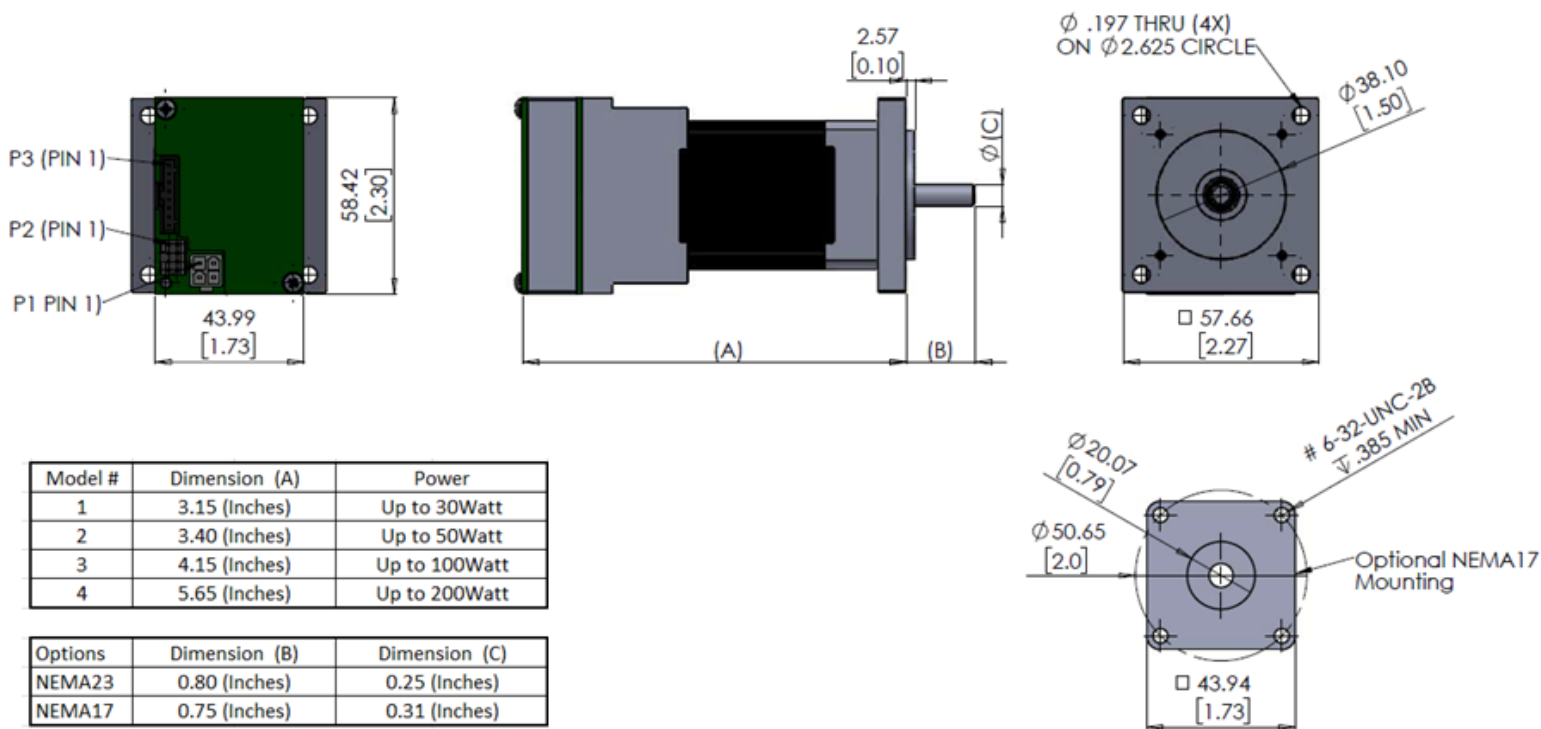
I/O CONNECTIONS			
PIN#	DESCRIPTION	PIN#	DESCRIPTION
1	BLANK	6	BLANK
2	BLANK	7	PWM/DIREC
3	BLANK	8	RUN/STOP
4	BLANK	9	RETURN
5	BLANK	10	+5VDC
POWER CONNECTIONS			
1	+VS	2	RETURN



## Options

Ask your Nidec Motor Corporation sales representative for integral control, encoder, and gearbox options.

### Dynamo with feedback dimensions



### Spur Gearing Available

- Up to 600:1 Gear Ratio
- Up to 200 oz-in [1412 mN-m] of Torque
- AGMA 7 Gear Quality



### Planetary Gearing Available

- Wide Selection of Gear Ratios and Features
- Inline and Metric
- High Torque and Low Backlash



## Modular Product Platform

† All marks shown within this document are properties of their respective owners.