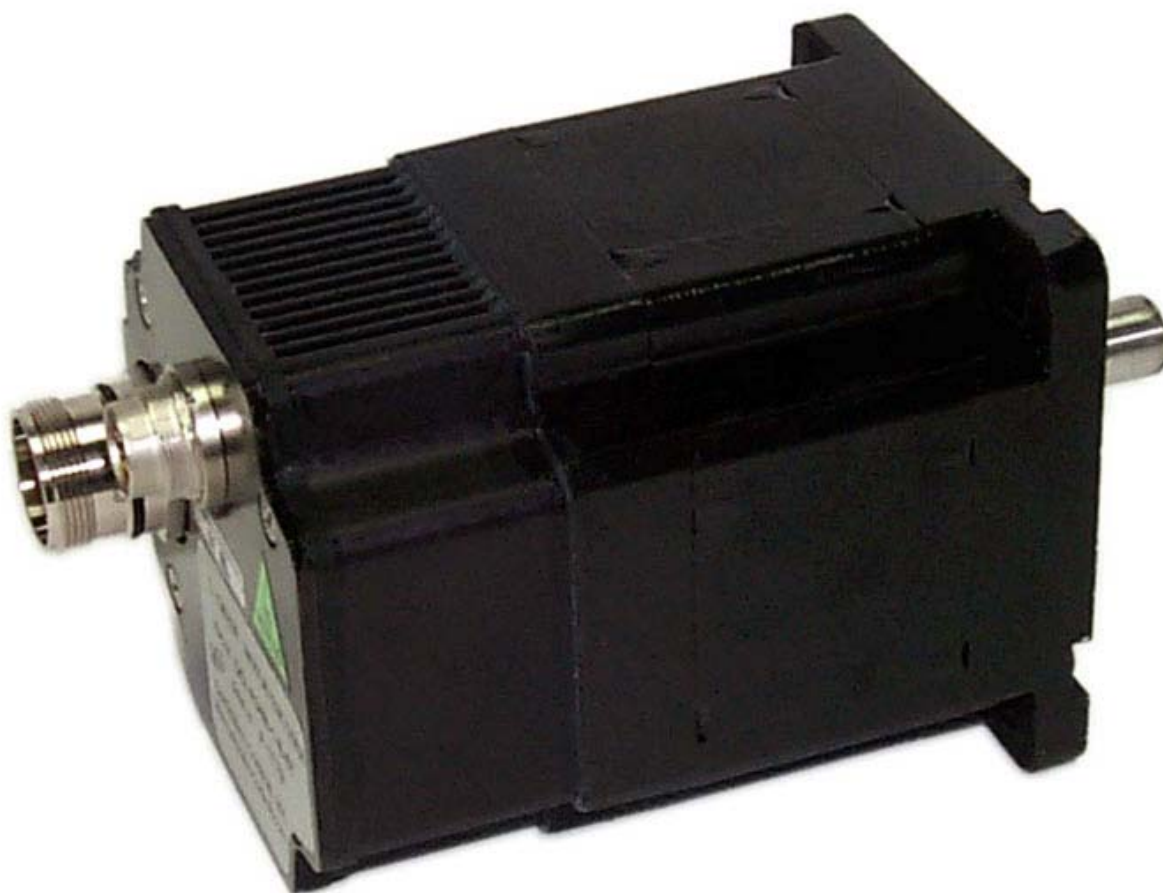


## NEMA 34 IP65 Motor/Encoder



**QCI-A34HC-1-6T**

Note: Motor specifications (including torque curves) are only true when the motors are used in conjunction with QuickSilver’s SilverLode™ Controller/Drivers (i.e. SilverNugget™). See the SilverNugget N3 datasheet (QCI-DS006) for more details.

## General Motor Specifications

Specifications	34N-1	34H-1	34HC-1	34HC-2	34HC-3	34HC-4
Maximum Speed (RPM)	2000	2000	3000	2500	2000	1500
Optimal Speed (RPM)	800	800	1600	1600	1000	800
Torque at Optimal Speed (oz-in)	275	390	350	390	770	990
Continuous Stall Torque (oz-in)	460	500	675	1300	1950	2550
Peak Power (Mech. Watts)	170	260	440	565	580	515
Rotor Inertia (oz-in <sup>2</sup> )	7.8	7.8	7.8	14.7	21.9	29.0
Weight (pounds)	6	6	6	10	13	16
Maximum Current (amps)	6.0	8.0	13.5	16.5	16	14.5
Shaft Diameter	0.500	0.500	0.500	0.500	0.625	0.625

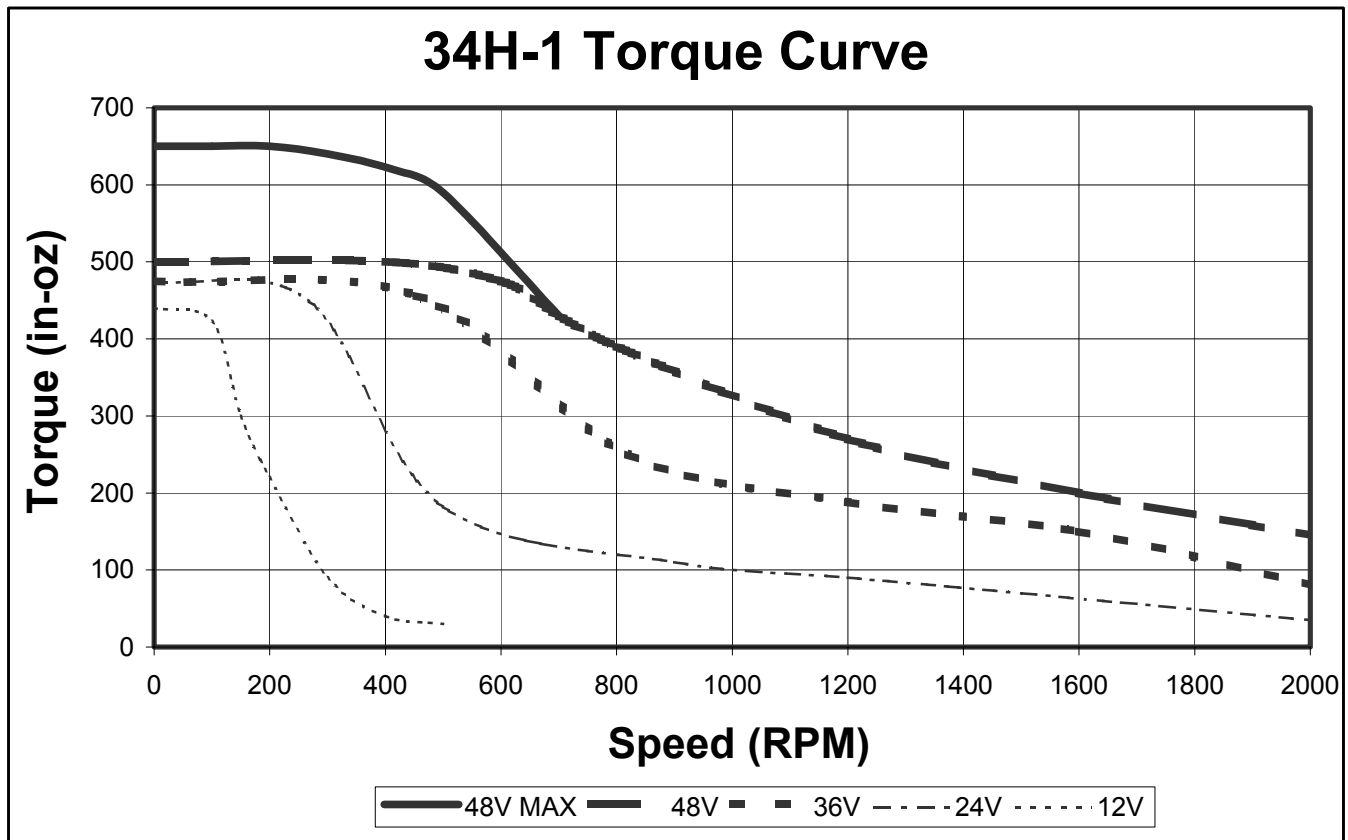
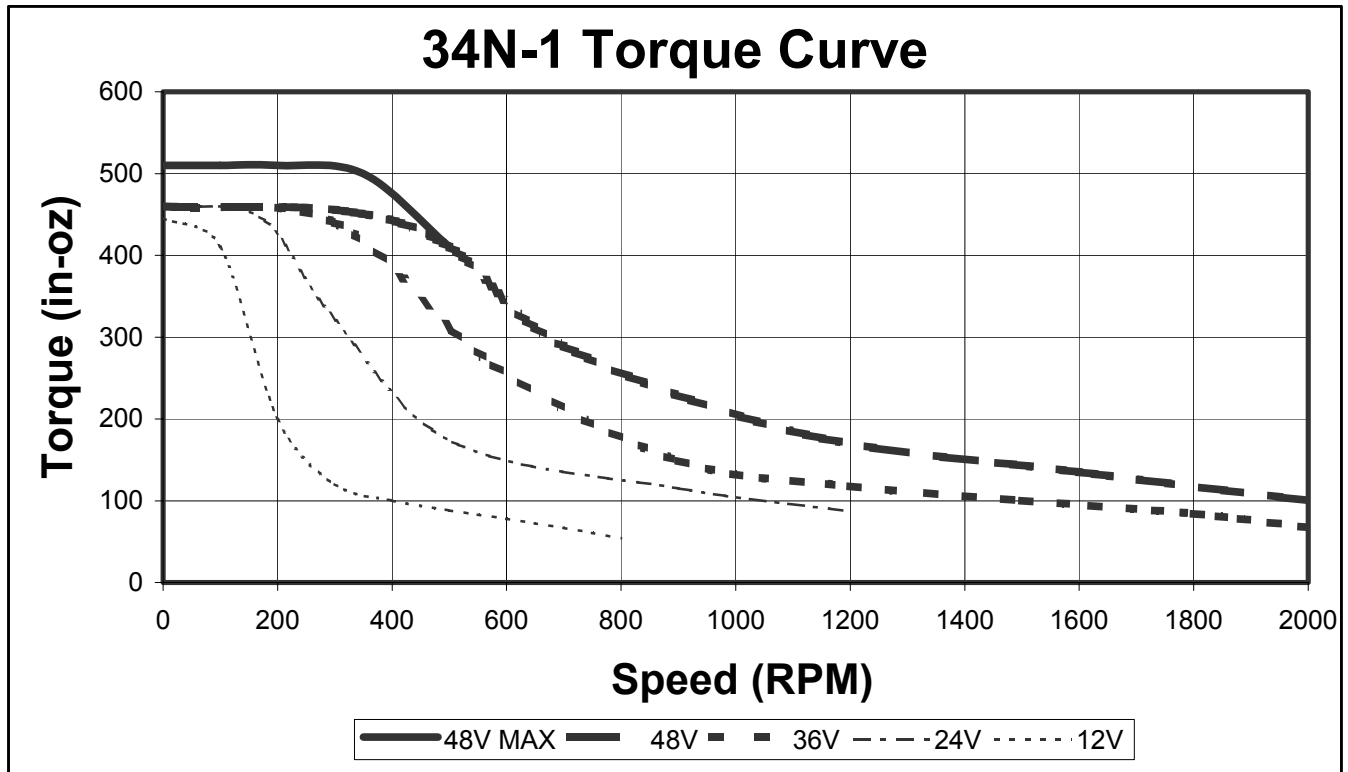
\*Optimal Speed: Near maximum power and efficiency.

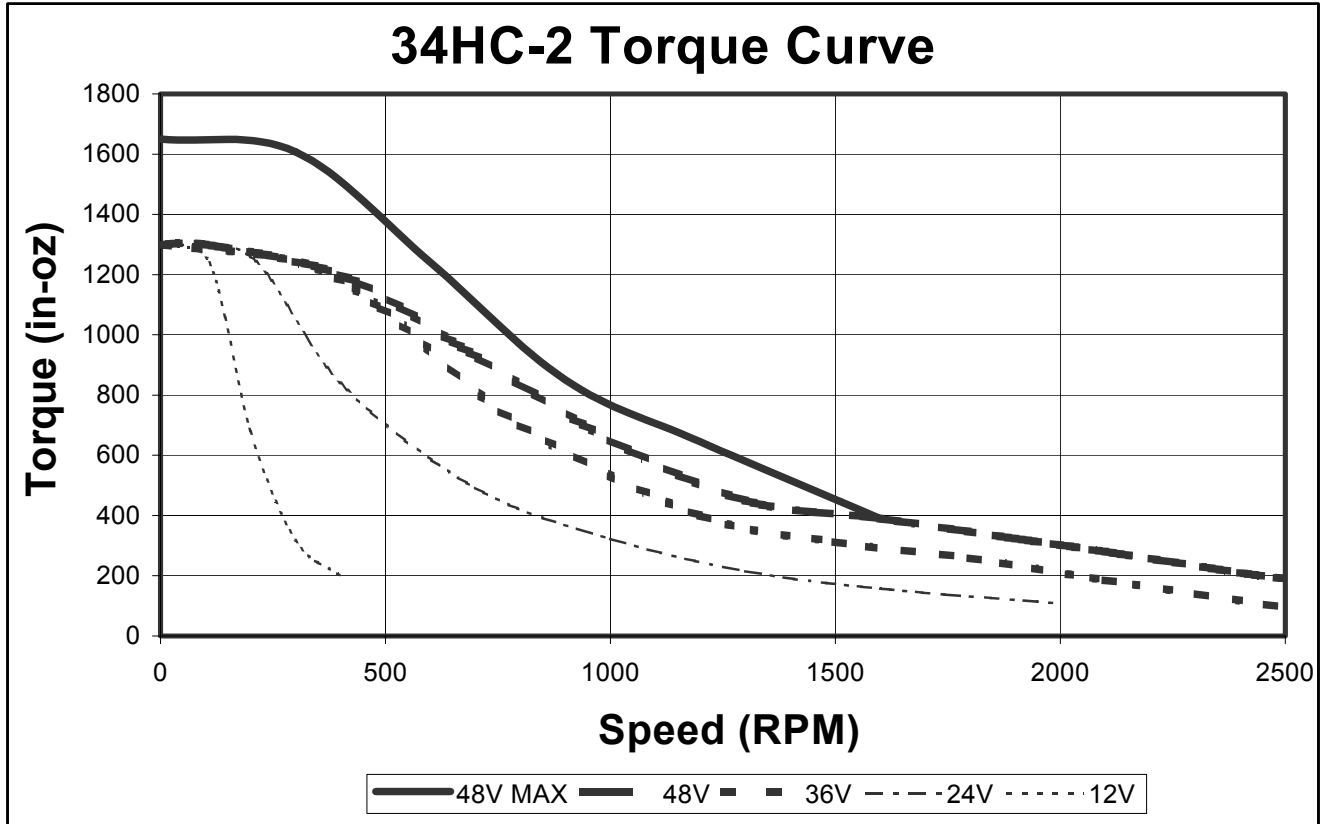
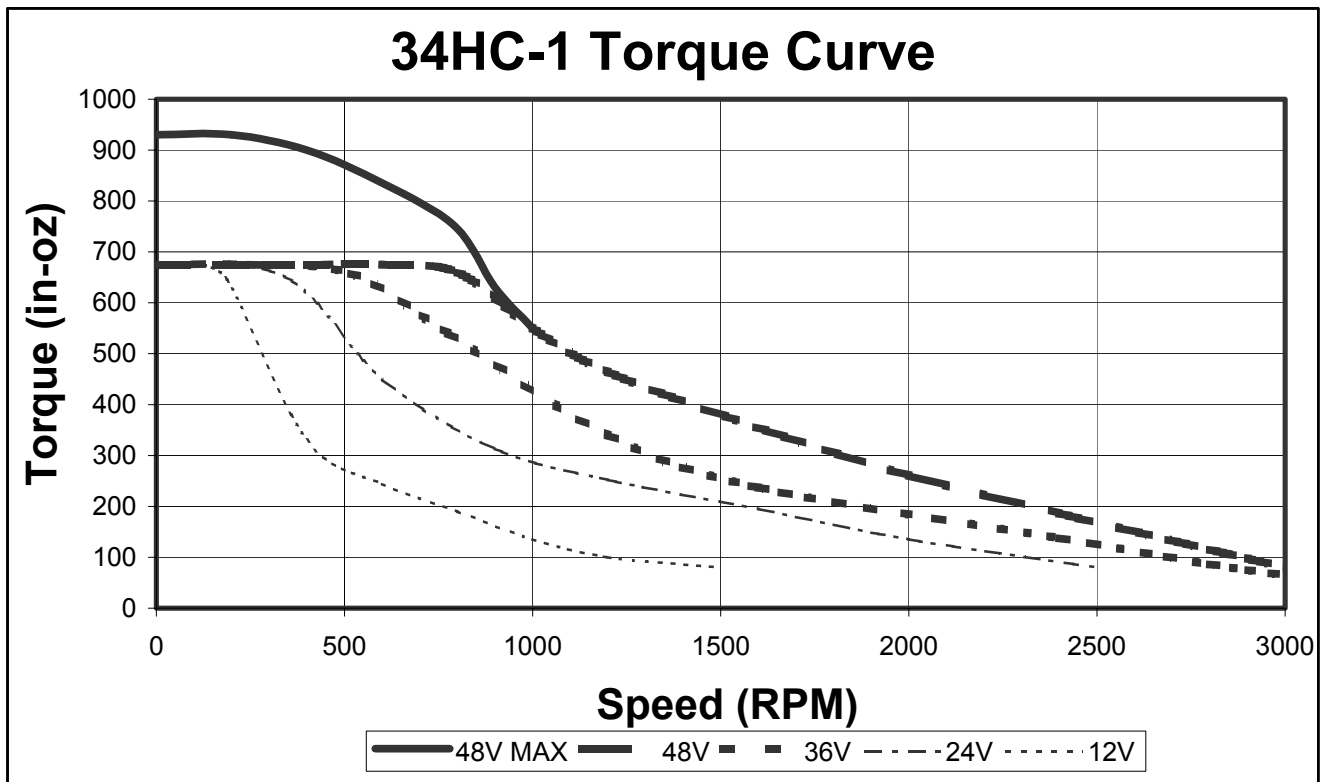
\*\*Maximum Current: Maximum current controller/driver required from power supply to achieve torque curves.

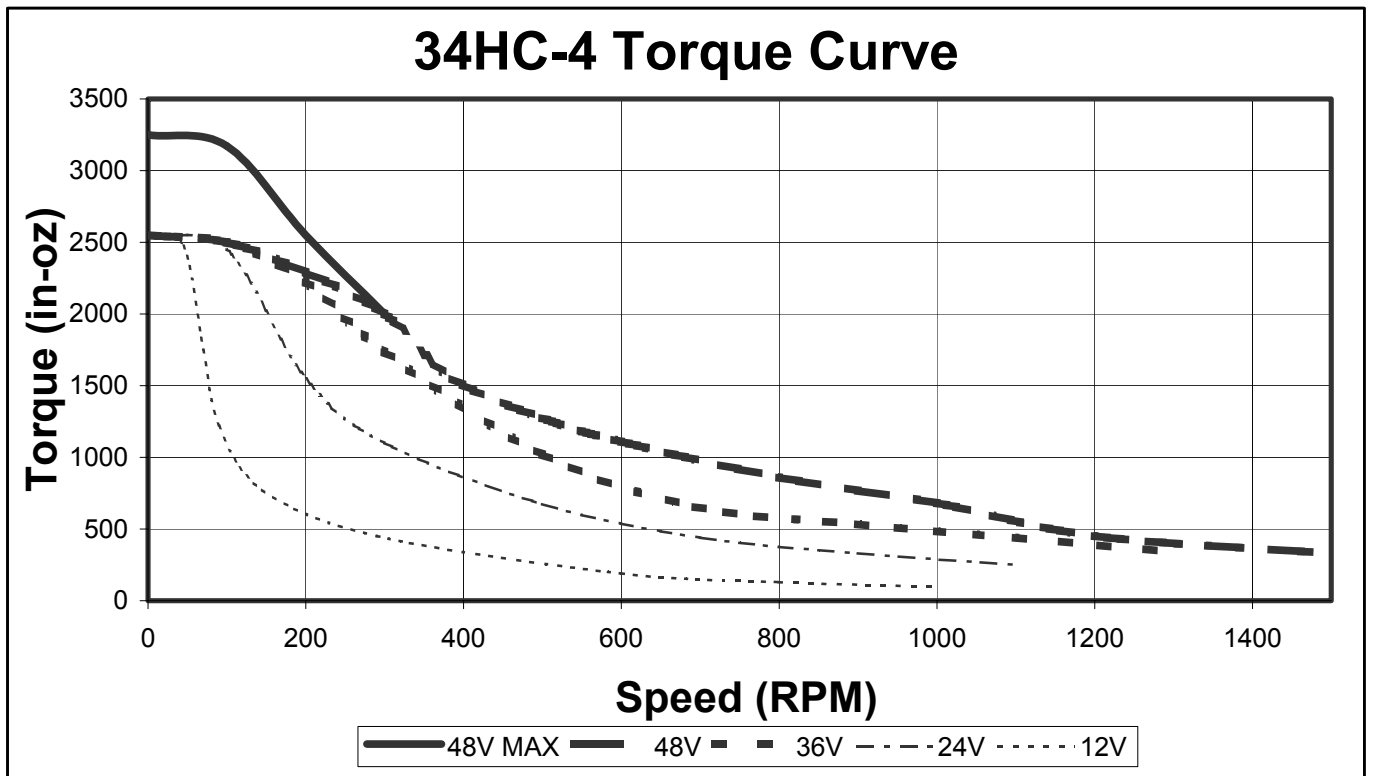
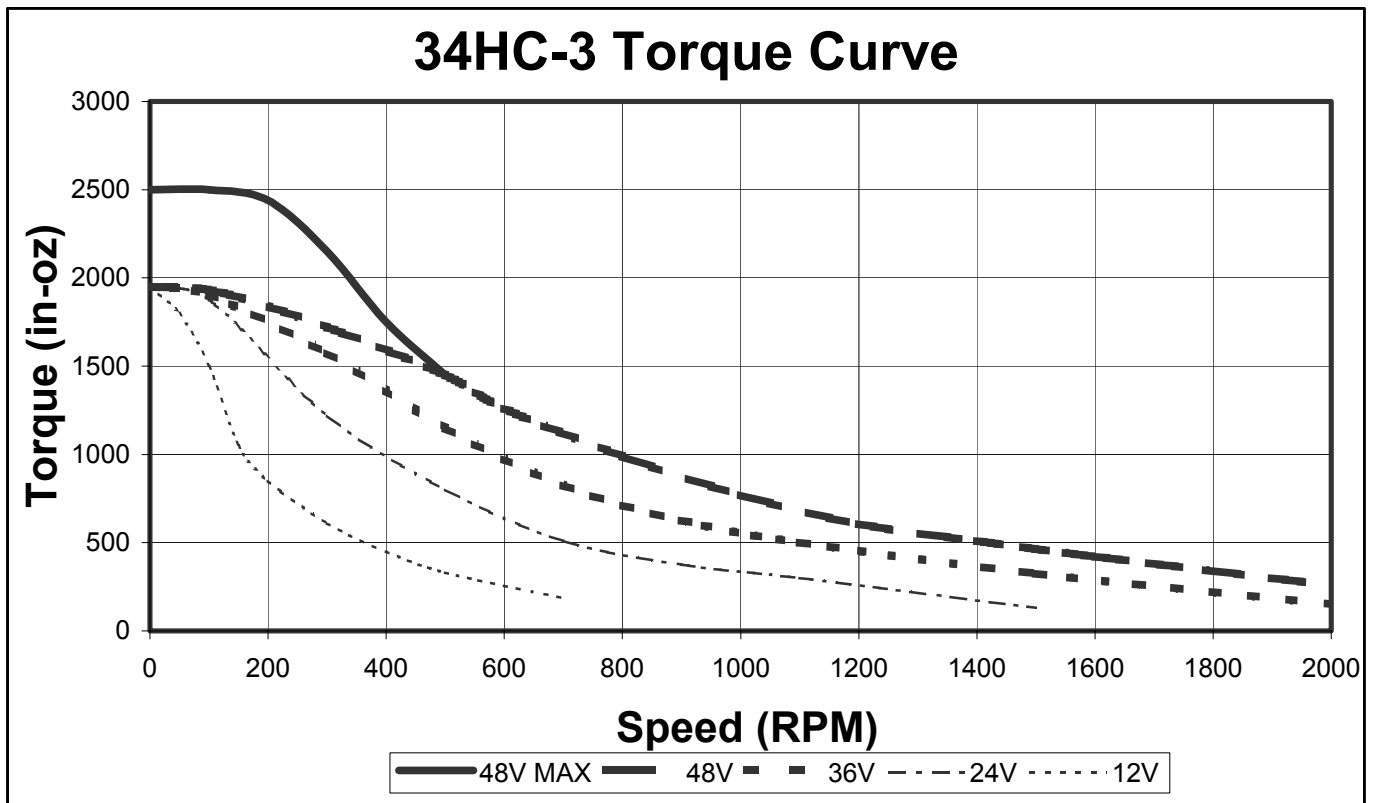
## Torque Curves

48V Max is the torque of the motor when the Torque Limits (TQL) command is set to “Max” (see SilverLode Command Reference for details on the TQL command). Operating the motor in this mode requires proper heat sinking on the Controller/Driver and motor to prevent overheating.

All other torque curves represent motor torque at the specified voltage when the TQL command is set to “100%”. These curves represent torque up to 100% duty cycle depending on ambient temperature, heat sinking and air flow.







## Electrical Specifications

### Encoder Interface

Encoder Count Per Revolution: 16000

Index Pulse: 49 - SilverLode Controller/Drivers internally translate to a single index pulse.

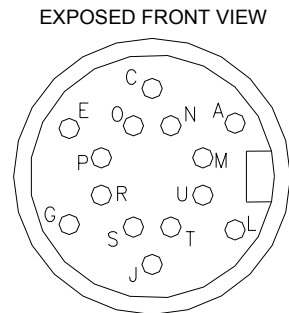
### Motor Memory

I-Grade motors come from the factory with a memory chip containing encoder and motor information. Future controller/driver products for NEMA 34 frame motors automatically upload motor memory information for system configuration.

## Connector Data

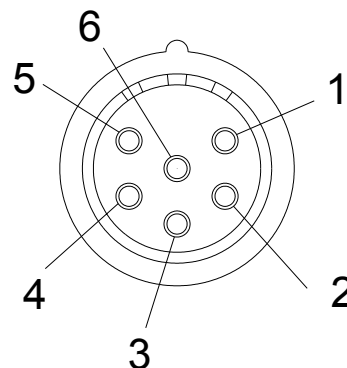
#### IP65 Encoder Connector

Pin	Signals
A	NC
C	+5V
E	Memory
G	NC
J	NC
L	NC
M	Z+
N	Z-
O	A+
P	B-
R	B+
S	GND
T	A-
U	GND

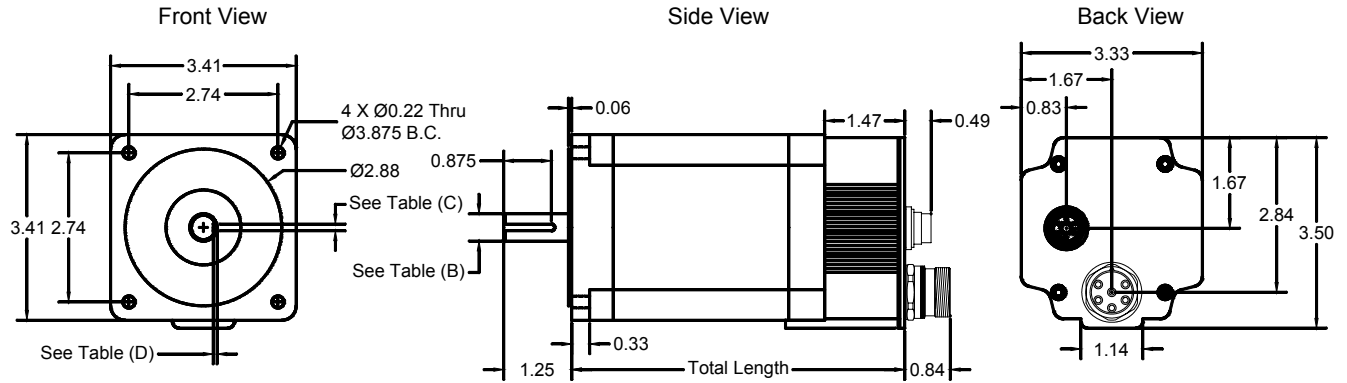


#### IP65 Motor Power Connector

Pin	Signals
1	Motor A-
2	Motor A+
3	Chassis GND
4	Motor B-
5	Motor B+
6	Chassis GND



## Mechanical Specifications



Model Series	Length (A) (inches)	Shaft Diameter (B) (inches)	Keyway Width (C) (inches)	Keyway Depth (D) (inches)
34N-1	4.54 " +/- 0.10	0.5000 +0.0000 / -0.0005	0.1250 +0.0000/ -0.0020	0.070 +0.000 / -0.017
34H-1	4.54 " +/- 0.10	0.5000 +0.0000 / -0.0005	0.1250 +0.0000/ -0.0020	0.070 +0.000 / -0.017
34HC-1	4.54 " +/- 0.10	0.5000 +0.0000 / -0.0005	0.1250 +0.0000/ -0.0020	0.070 +0.000 / -0.017
34HC-2	6.12 " +/- 0.10	0.5000 +0.0000 / -0.0005	0.1250 +0.0000/ -0.0020	0.070 +0.000 / -0.017
34HC-3	7.60 " +/- 0.10	0.6250 +0.0000 / -0.0005	0.1875 +0.0000/ -0.0020	0.108 +0.000 / -0.017
34HC-4	9.15 " +/- 0.10	0.6250 +0.0000 / -0.0005	0.1875 +0.0000/ -0.0020	0.108 +0.000 / -0.017

## Environmental Specifications

### Operational Temperature

-10 C to +80 C

### Storage Temperature

- 40 C to +85 C

### Shock

Limitation is approximately 50g/11ms.

### IP Rating

IP65

## Recommended Components

### **SilverNugget N3 Controller/Driver (QCI-N3-E3-04-EE)**

See the SilverNugget I-Grade N3 datasheet (QCI-DS006) for details on designing with these controller/driver.

### **IP65 Motor Interface Cable (QCI-C-D15P-T14S-nn)**

This cable goes between the motor and the SilverNugget N3. Replace the last two digits “nn” with length of cable in feet (i.e. –10 for 10 feet).

### **IP65 Motor Interface Cable (QCI-C-D5P-T6S-nn)**

This cable goes between the motor and the SilverNugget N3. Replace the last two digits “nn” with length of cable in feet (i.e. –10 for 10 feet).

### **SilverLode Manuals (QCI-SLM) QuickControl Software (QCI-QC)**

The SilverLode User Manual, SilverLode Command Reference and QuickControl Software are also available on our website. We recommend first time users reading chapter 1 of the User Manual.

### **Power Supply (i.e. SP-500-48, SCN-800-48)**

A 12-48V power supply producing the amps specified above (see General Motor Specifications) is required. QuickSilver recommends:

- S-320-48 (48V, 6.25A): 34N-1
- SP-500-48 (48V, 10A): 34H-1
- SCN-800-48 (48V, 16.5A): 34HC-1, 34HC-2, 34HC-3, 34HC-4



## Part Number

NEMA 34 I-Grade Motors/Encoders		
MOTOR TYPE	MOTOR SIZE	MOTOR INTERFACE
<ul style="list-style-type: none"> <li>• <b>A34N</b> - Standard</li> <li>• <b>A34H</b> - High Power</li> </ul>	<ul style="list-style-type: none"> <li>• 1</li> </ul>	<b>6T</b> – IP65 <ul style="list-style-type: none"> <li>• Round Encoder Connector (14-Pin)</li> <li>• Round Power Connector (6-Pin)</li> </ul>
<ul style="list-style-type: none"> <li>• <b>A34HC</b> - High Current</li> </ul>	<ul style="list-style-type: none"> <li>• 1</li> <li>• 2</li> <li>• 3</li> <li>• 4</li> </ul>	
To create a part number, choose one from each column above. For example: IP65 34 Motor Size 1		
<b>QCI-A34N</b>	<b>1</b>	<b>6T</b>
This selection creates the part number: <b>QCI-A34N-1-6T</b>		

## New Part Numbers

The part numbers have been revised

Old Part Number	New Part Number
QCI-A34N-1-B-6T	QCI-A34N-1-6T
QCI-A34H-1-B-6T	QCI-A34H-1-6T
QCI-A34HC-1-B-6T	QCI-A34HC-1-6T
QCI-A34HC-2-B-6T	QCI-A34HC-2-6T
QCI-A34HC-3-B-6T	QCI-A34HC-3-6T
QCI-A34HC-4-B-6T	QCI-A34HC-4-6T

## Contact Information

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