

Arcus Stepper Motor

Manual

STM-34 Series

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Revision History:

- 1.0 – First Revision
- 1.01 – Updated current specifications
- 1.02 – Updated torque curves
- 1.03 – Added 3-stack torque curve

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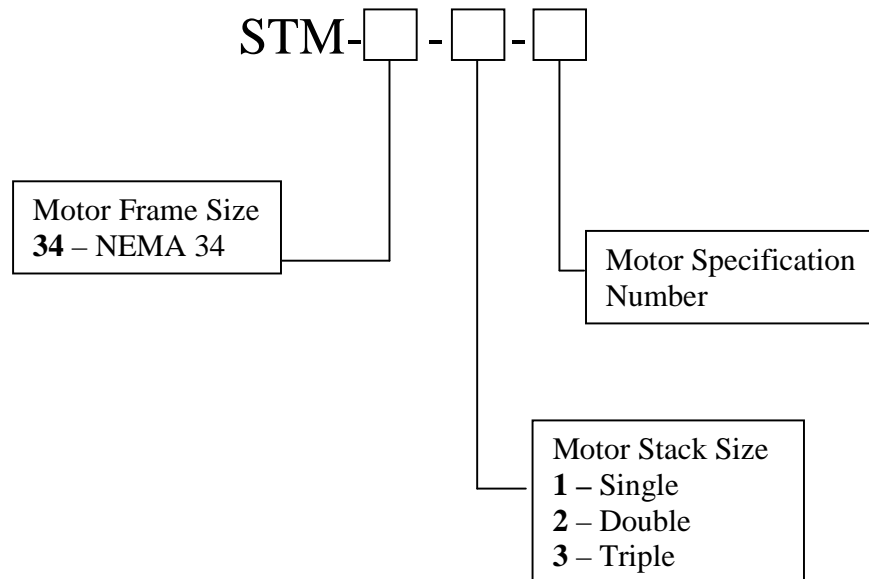
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1. Introduction

Arcus stepper motors are brushless, synchronous electric motors with the following features:

- NEMA 34 motor frame sizes
- Bi-polar operation with 4 leads (A, /A, B, /B)
- Single, double and triple standard stack sizes
- 200 steps per revolution when operating under full step mode (1.8 degree/step)

2. Part Numbering

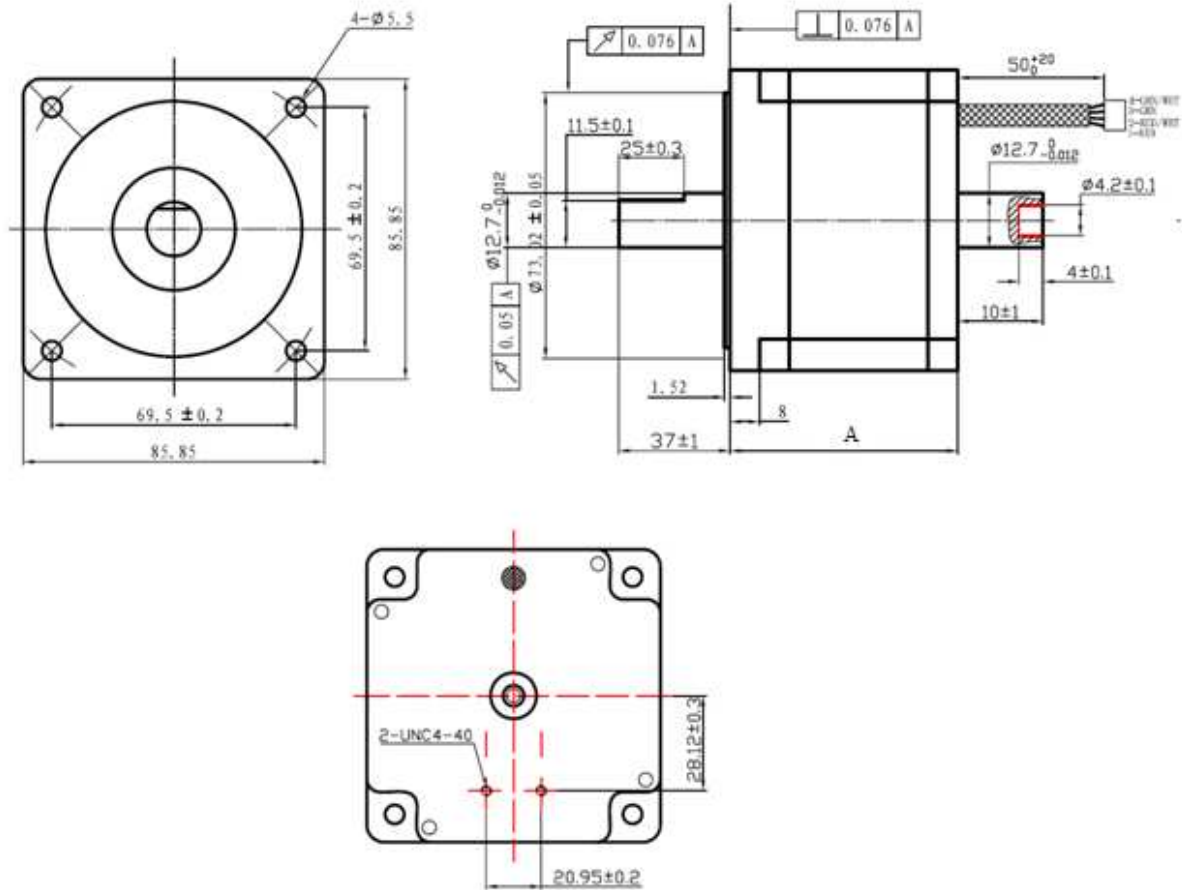


Motor Frame Size – Standard bi-polar step motors are available in NEMA 34 sizes.

Motor Stack Size – Standard stack size motor available: (1) Single (2) Double, (3) Triple.
Typically, a larger size motor can handle higher torque, but is slower and require higher current.

3. Dimensions

STM-34-X-X



Dimensions in mm

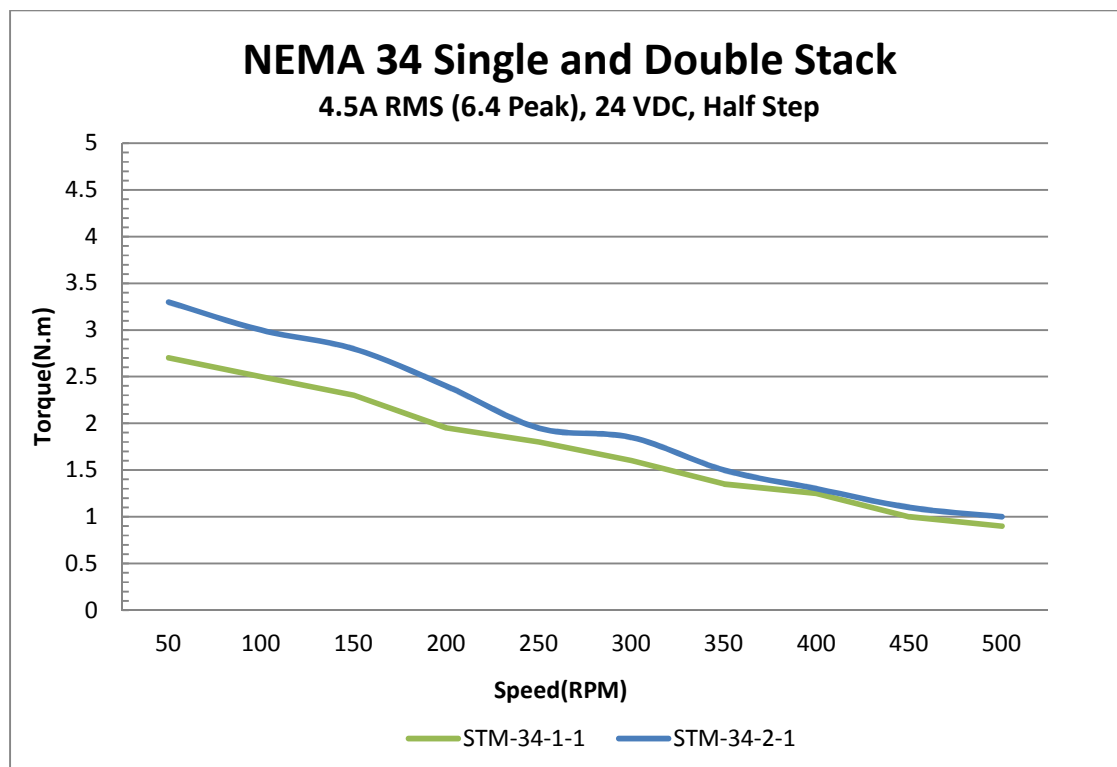
Motor	Length A
STM-34-1-1	65 mm
STM-34-2-1	80 mm
STM-34-3-1	118 mm

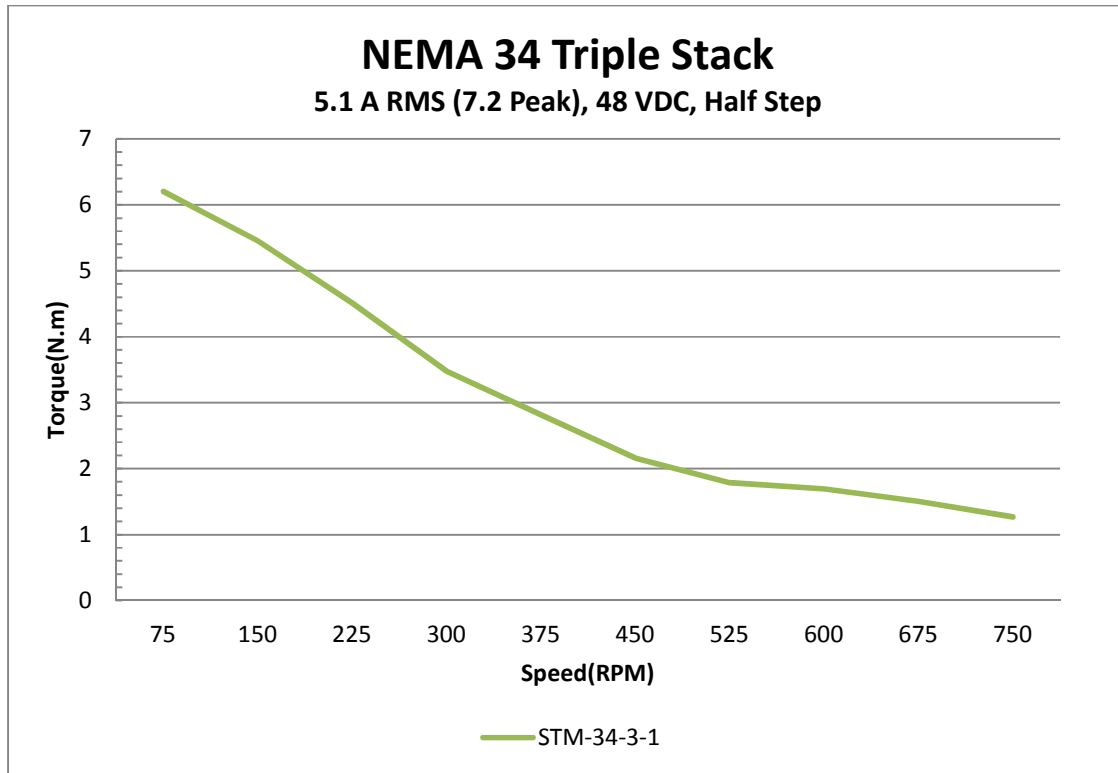
4. Motor Specifications

The following chart shows the specifications of standard step motors used for all Arcus products. All standard step motors are 1.8 degree bi-polar step motors.

NEMA Size	Part #	Stack Size	Amp / Phase	Holding Torque	Resistance / Phase	Inductance / Phase	Inertia
34	STM-34-1-1	1	4.0A	3.5 N-m	0.60 Ohm	3.8 mH	5.47 oz-in ²
	STM-34-2-1	2	5.5A	4.5 N-m	0.46 Ohm	4.0 mH	7.64 oz-in ²
	STM-34-3-1	3	6.0A	8.5 N-m	0.60 Ohm	6.5 mH	14.76 oz-in ²

Torque Curves





5. Connectors

Connector Information

Mating Connector Description: 4 pin 0.156" (3.96mm) connector
 Mating Connector Manufacturer: JST Sales America Inc
 Mating Connector Manufacturer Part: †VHR-4N



† Other 3.96 mm compatible connectors can be used.

Wire Color Code

STM-34-X-X

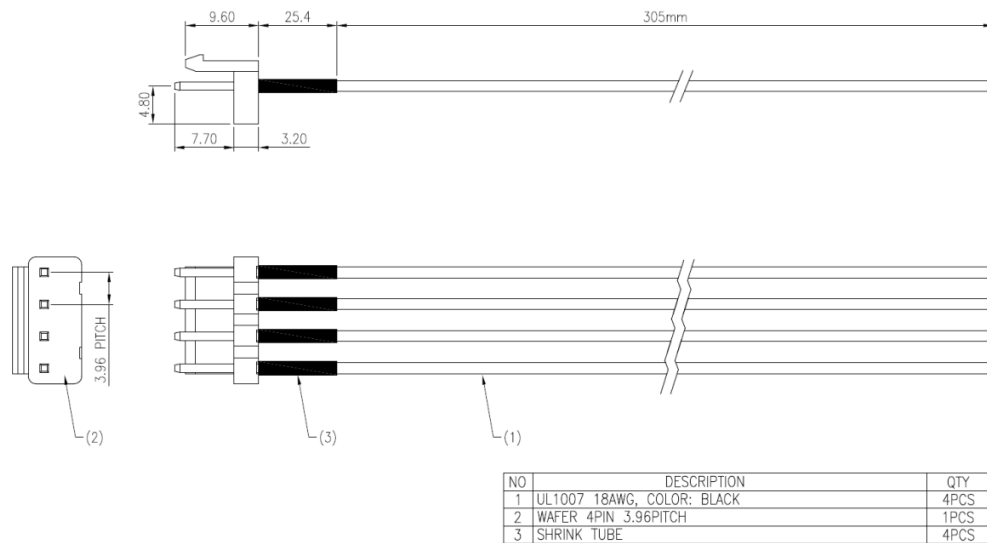
Phase A	RED	Pin 1
Phase /A	RED/WHITE	Pin 2
Phase B	GREEN	Pin 3
Phase /B	GREEN/WHITE	Pin 4

For: STM-34-1-1, STM-34-2-1, STM-34-3-1, STM-34-3-2

6. Connector Extensions

All STM purchases come with a 12” extension cable that extends the integrated connector into flying lead wires for easy interfacing.

NEMA 34



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