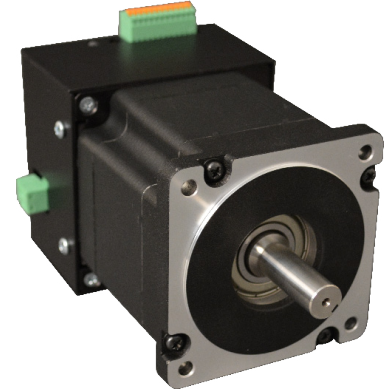


# 34MDSI Series - Integrated Stepper Motor/ Driver/Controllers



## FEATURES

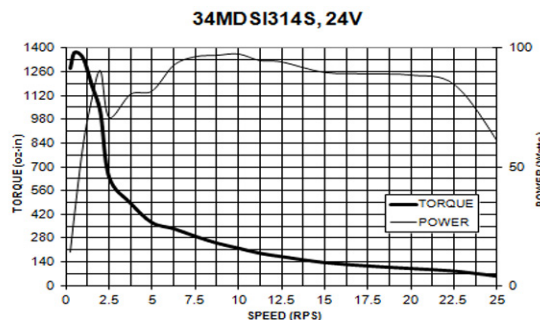
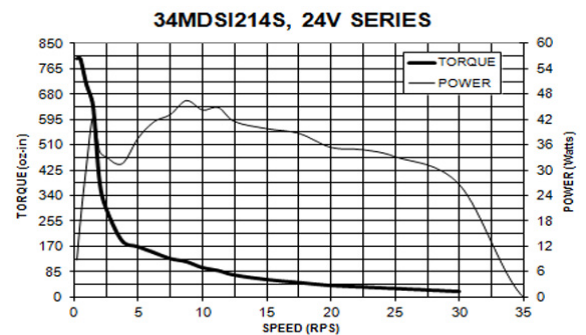
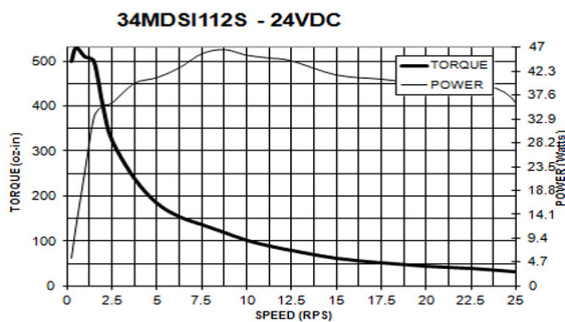
- **Eliminates Motor Wires**
- **Upto 1,700 Oz-in Torque**
- **MicroStep Divisor of 10**
- **Compact Package**
- **20-80V Power Requirement**
- **RS485 Communications**
- **TTL Logic or 24V Level Inputs Available**
- **0.18° Step Resolution**
- **Efficient and Durable**
- **Ideal for Precise Positioning**



## DESCRIPTION

The 34MDSI Series has a compact construction that integrates a simple indexer/driver/controller, microstepping driver and a stepper motor in one streamline package. With the three parts combined into one casing, the need to include motor wires has been eliminated. The microstepping driver will operate off 20VDC minimum to 80VDC maximum. The 34MDSI Series has an output current capability of 1.5 Amps minimum to 10.0 Amps maximum (Peak Rating). The inputs are capable of running from either open collector, TTL level logic outputs or 24VDC outputs from PLCs and are all active low. The microstepping driver features resolution of 2000 steps/revolution, providing smooth rotary operation. The 34MDSI Series comes in either a single shaft version or a double shaft version with optical encoder. Motor stack lengths of 1, 2, or 3 allow for varying amounts of start-up torque, dynamic torque and inertia. The 34MDSI Series features built in over temperature and short circuit shut down protection. It also has automatic 50% reduction in stepper motor current after indexing is complete and status LED's to indicate power on (green LED), motor running (yellow LED) and communication errors (red LED).

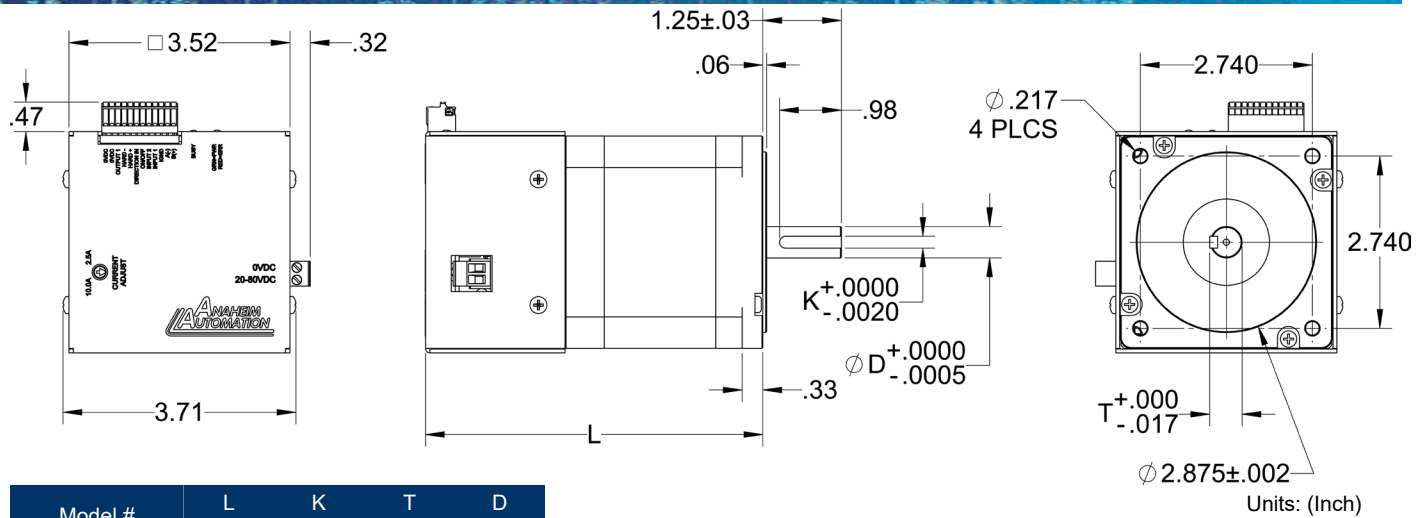
## TORQUE CURVES



Note: The 10<sup>th</sup> character "S" denotes a single shaft. Custom leadwires, cables, connectors, and windings are available upon request.

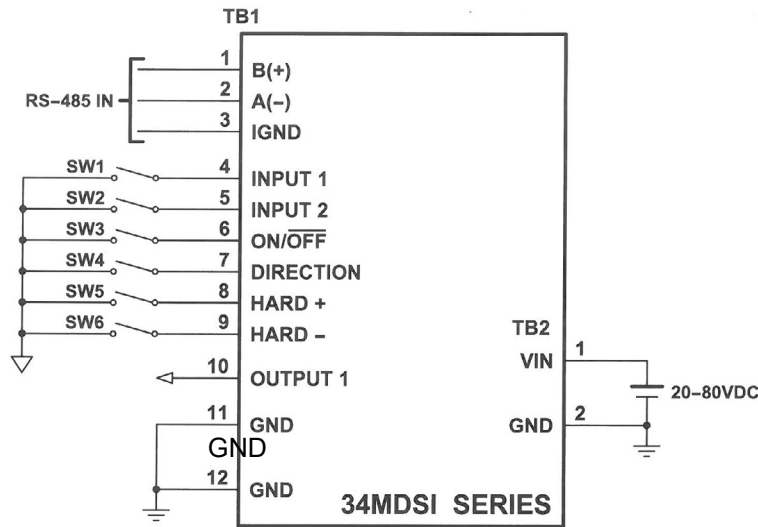
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DIMENSIONS



Model #	L (in)	K (in)	T (in)	D (in)
34MDSI112S	5.40	0.125	0.555	0.500
34MDSI214S	6.90	0.125	0.555	0.500
34MDSI314S	8.39	0.1875	0.705	0.625

WIRING DIAGRAM



SPECIFICATIONS

Model #	NEMA Size	Bipolar Torque (oz-in)	Rotor Inertia (oz-in-sec <sup>2</sup> )	Weight (lbs)
34MDSI112S	34	637	0.0198	5.70
34MDSI214S	34	1200	0.038	8.94
34MDSI314S	34	1700	0.057	12.10

Power Requirements:	20-80VDC	Microstepping Res.	2000 steps/rev
Input Voltage (Inputs):	3.5 - 24VDC	Driver Type:	Bipolar Series
Step Angle Accuracy:	+/- 5% (Full Step, No Load)	Insulation Resistance:	100M Ohm Min, 500VDC
Resistance Accuracy:	+/-10%	Dielectric Strength:	500VDC for one minute
Inductance Accuracy:	+/-20%	Radial Play:	0.02" at 1.0 lbs
Temperature Rise:	80°C Max (2 Phases On)	End Play:	0.08" at 1.0 lbs
Ambient Temperature:	-20° to +50° C	Max Radial Force:	16.9 lbs (0.79" from flange)
Insulation Type:	Class B	Max Axial Force:	3.4 lbs-Force

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