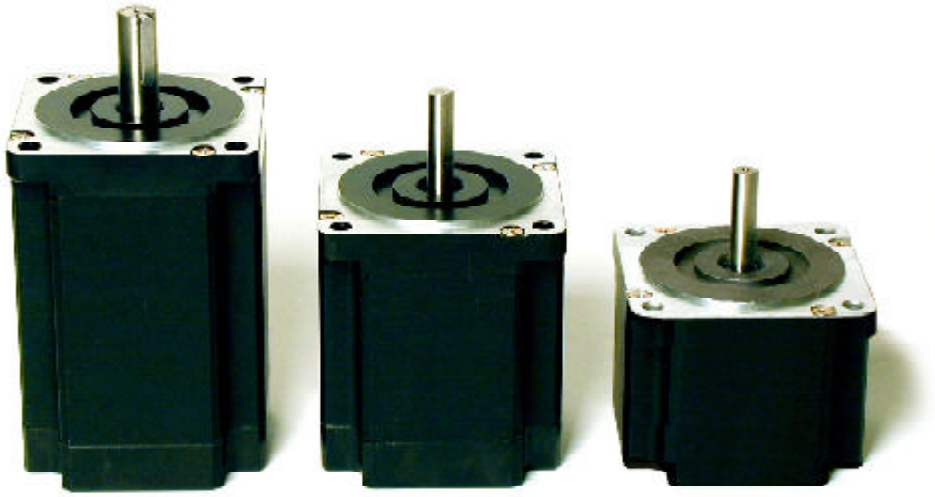
Product Data

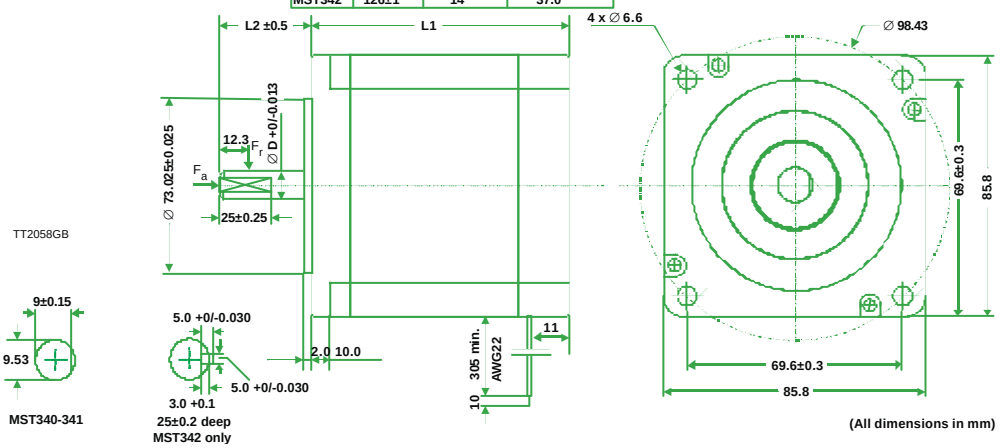
JVL...integration in motion

High Quality, High Torque Step Motors MST340, 341 and 342



- Highest torque density rating in the industry
- High torque-to-inertia for faster start and stop
- Rugged design and long life bearings
- High power, cooler running, rare-earth magnet design
- Exposed-lamination housing, optimized for high torque and smooth, accurate microstepping
- Standard NEMA34 mounting
- Facilities for encoders, double shaft, different shaft types, etc.
- High axial and radial shaft load
- Cost-effective alternative to servo motors
- Low noise
- Option for planetary gearhead

Model	Length L1	Shaft dia.:D	Shaft length: L2
MST340	66±1	9.53	30.5
MST341	96±1	9.53	30.5
MST342	126±1	14	37.0



High Quality, High Torque Step Motors MST340-342

Specifications

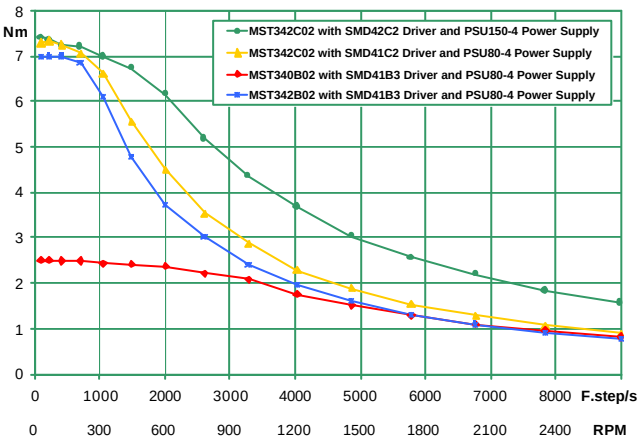
Step motors MST340, 341, 342 have been designed by JVL for use with the entire range of JVL Step Motor Drivers and Controllers. MST340/41/42 are high torque step motors especially made for mini- and microstep operation.

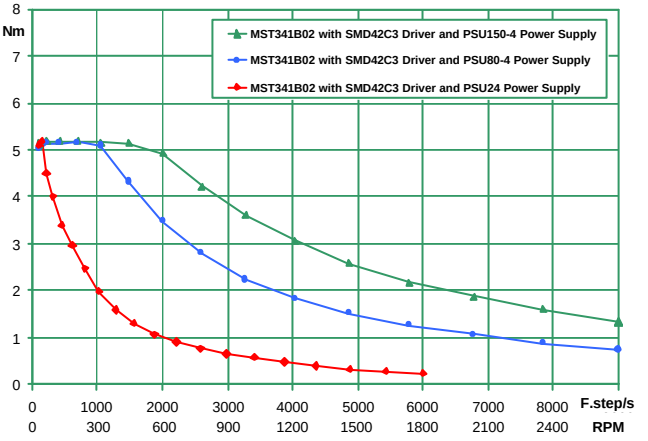
General Specifications	
Step angle	1.8 Deg/200 steps/rev.
Number of phases	4 (8 leads)
Fullstep angle accuracy. No load	±2% of 1.8° = 0.036°
Microstep angle accuracy. No load	±5% of 1.8° = 0.09°
Ambient temperature	-25°C to 40°C
Operating temperature	Max. 130°C
Insulation resistance	100 MOhm Min. (500V DC)
Insulation class	Class B=130
Cable Length	305mm
Protection	IP41 Option IP54 with oil seal
Radial play	Max. 0.025mm (0.5kg load)
End play	Max. 0.075mm (1kg load)
Radial load (F_r)	Max. 18kg (applied 12.3mm from shaft end)
Thrust load (F_a)	Max. 11.5kg
Max. drive voltage	165 VDC

Nominal data at 25°C. Actual data will vary ±10%

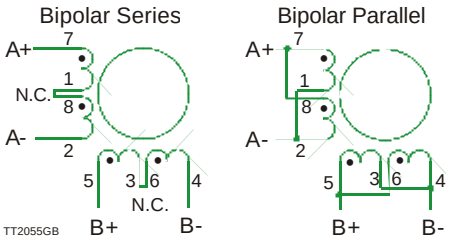
Electrical and Mechanical Specifications	MST340B02		MST341B02		MST342B02		MST342C02	
	Parl.	Ser.	Parl.	Ser.	Parl.	Ser.	Parl.	Ser.
Holding Torque (Nm)	3.0		6.1		9.0		9.0	
Running Torque (low speed)(Nm)	2.5		5.1		7.2		7.2	
Phase Current (A)	6.6	3.3	6.5	3.3	6.8	3.4	9.5	4.7
Phase Resistance (Ohm)	0.2	0.8	0.2	0.9	0.4	1.9	0.2	0.9
Phase Inductance (mH)	0.9	3.4	1.3	5.2	2.2	8.6	1.4	5.4
Phase Voltage (V)	1.9	3.8	3.0	6.0	3.5	7.0	3.0	6.0
Weight (kg)	1.8		2.8		3.8		3.8	
Rotor Inertia ($kgcm^2$)	1.4		2.7		4.0		4.0	

Torque-Velocity Profiles





Connections

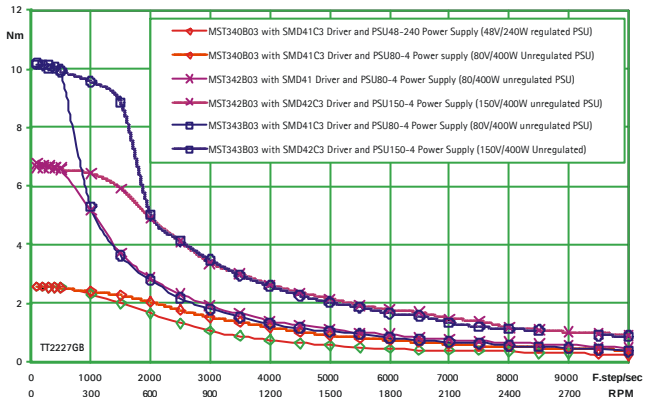


Color	Pin no.	Bipolar Series	Bipolar Parallel
Black	7	A+	A+
White/Black	1	Pin 8 and 1 connected together	A-
White/Orange	8		A+
Orange	2	A-	A-
Red	5	B+	B+
White/Red	3	Pin 3 and 6 connected together	B-
White/Yellow	6		B+
Yellow	4	B-	B-

Motor direction can be reversed by changing A+ and A-

Note: N.C. not to be connected to other places in Bipolar Series.

Option: IP54 Oil Seal MST340-SMI1



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