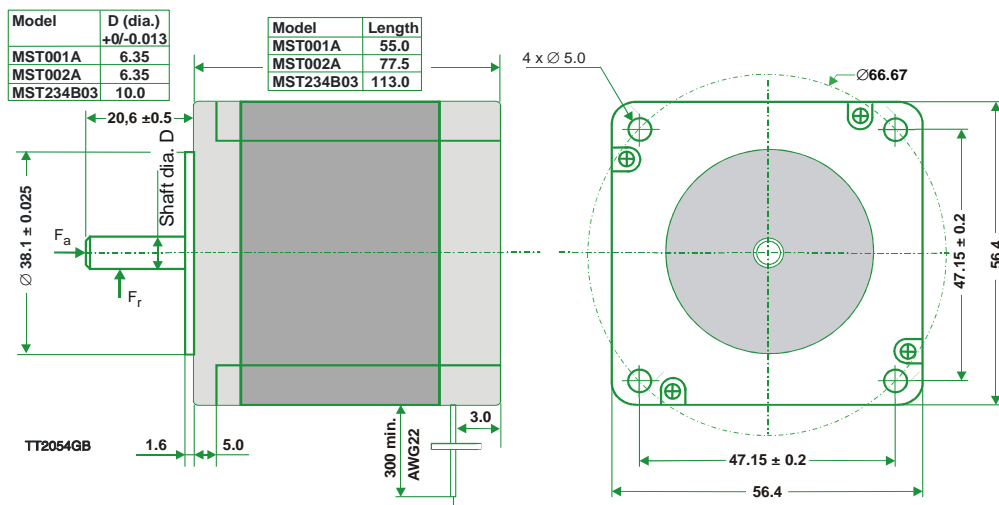


High Torque Step Motors MST001A, MST002A and MST234B03



- 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 NEMA23 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



(All dimensions in mm).



High Torque Step Motors

MST001A, MST002A and MST234B03

Specifications

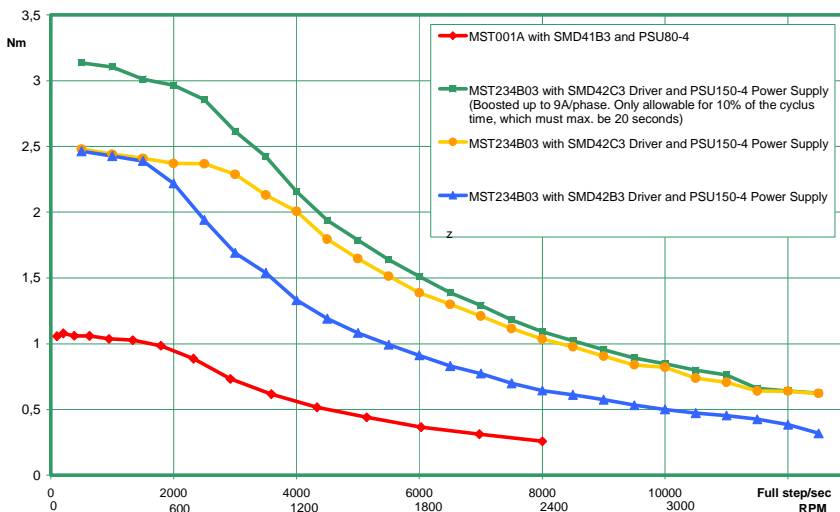
Step motors MST001A, MST002A and MST234B03 have been designed by JVL for use with the entire range of JVL Step Motor Drivers and Controllers.

General Specifications	
Step angle	1.8 Deg/200 steps/rev.
Number of phases	4 or 8 leads
Angular accuracy, No load	±5% of 1.8° = 0.09°
Ambient temperature	-35°C to 40°C
Operating temperature	Max. 110°C
Insulation resistance	100 MOhm Min. (500V DC)
Insulation class	Class B=130
Cable length	300mm
Protection	IP41 Option IP54 with oil seal
Radial play	Max. 0.025mm (0.5kg Load)
End play	Max. 0.075mm (1kg Load)
Max. drive voltage	160 VDC

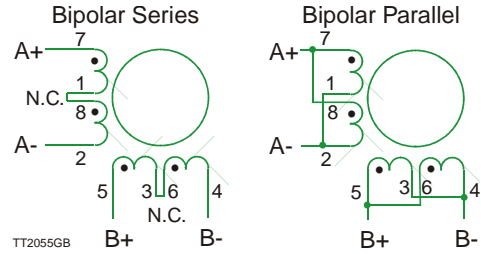
Nominal data at 25°C. Actual data will vary ±10%

Electrical and Mechanical Specifications	MST001A	MST002A		MST234B03	
		Parl.	Ser.	Parl.	Ser.
Holding Torque (Nm)	1.2	1.5		2.6	
Running Torque (low speed)(Nm)	1.1	1.2		2.4	
Phase Current (A)	2.5	2.82	1.42	5.9	3.0
Phase Resistance (Ohm)	1.1	0.5	5.5	0.5	2.0
Phase Inductance (mH)	5.6	0.9	8.4	1.15	4.6
Phase Voltage (V)	2.8	3.0	4.5	2.1	4.2
Weight (kg)	0.74	1.1		1.7	
Rotor Inertia (kgcm ²)	0.3	0.46		-	
Detent Torque (Nm)	-	0.07		-	
Radial Load	Max. 7kg (applied 13.9mm from the flange)		Max. 12kg (applied 20mm from the flange)		
Axial Load	Max. 6kg		Max. 2kg		

Torque-Velocity Profiles



Connections



Color			Pin no.	Bipolar Series	Bipolar Parallel
MST001A	MST002A	MST234B03			
Black	Red	Red	7	A+	A+
	Red/White	Red/White	1	8+1	A-
	Yellow	Black/White	8		A+
Orange	Yellow/White	Black	2	A-	A-
Red	Orange	Green	5	B+	B+
	Orange/White	Green/White	3	3+6	B-
	Black	Yellow/White	6		B+
Yellow	Black/White	Yellow	4		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 for MST001A: MST001-SIMMERING



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