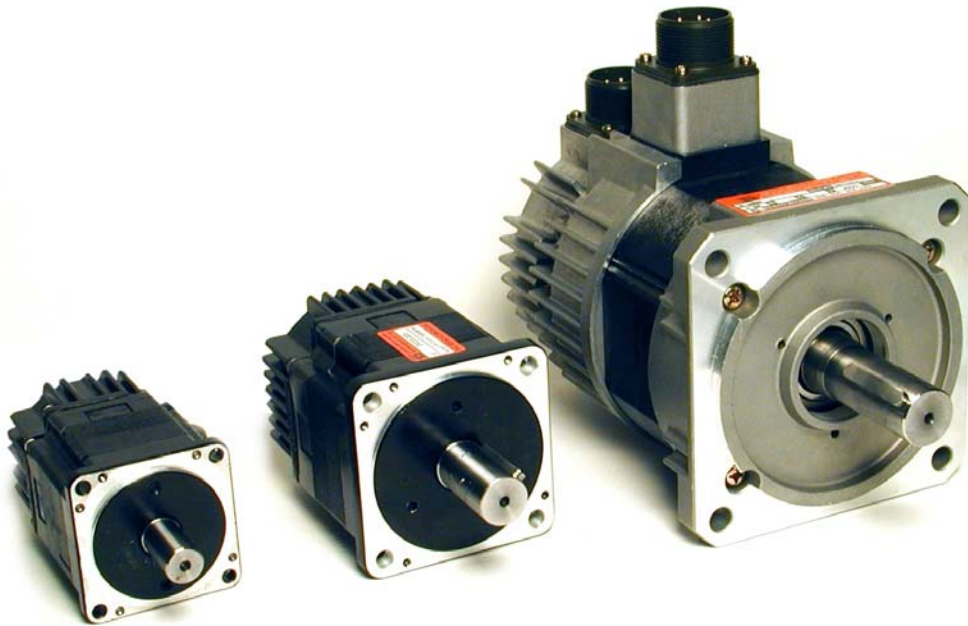


High Quality, High Torque AC Servo Motors MSE400, 800, 1K5 and 3K0

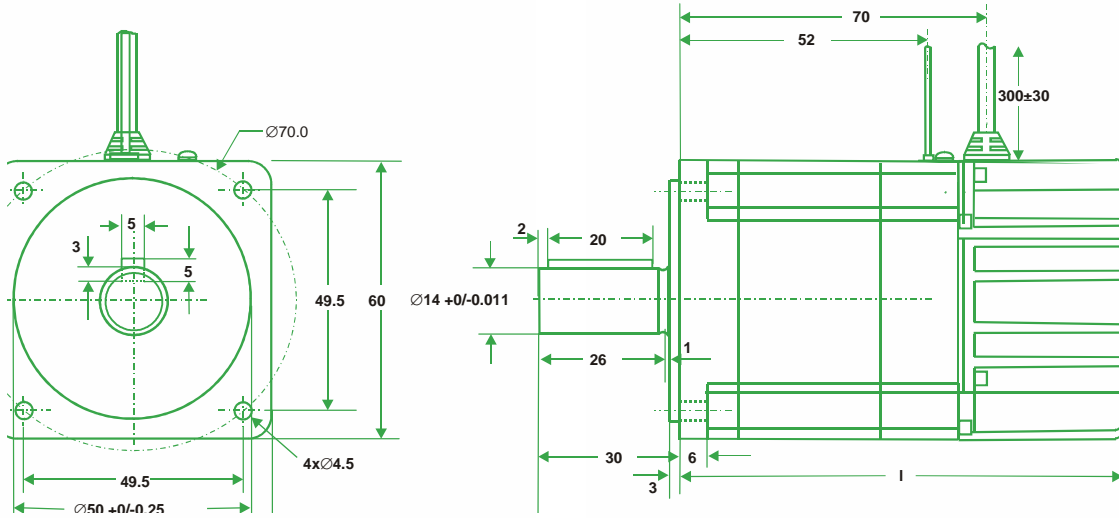


- Highest torque density rating in the industry
- High torque-to-inertia for faster start and stop
- Rugged design and long life bearings
- High power, cooler running, rare-earth magnet design
- Exposed-lamination housing, optimized for high torque and smooth operation
- Encoder 2000p/r. With JVL AMC20 series servo motor controller, 8000 counts/r with index pulse.
- Very short length compared to power rating: 750W@102mm
- Standard servo flange
- Yaskawa/Omron flange and shaft
- High axial and radial shaft load
- Low noise
- Option for planetary gearhead
- Option for 24VDC brake built-in
- MSE400, 800, 1K5 and 3K0 have been designed by JVL for use with the JVL AMC20 series of advanced AC servo controllers.

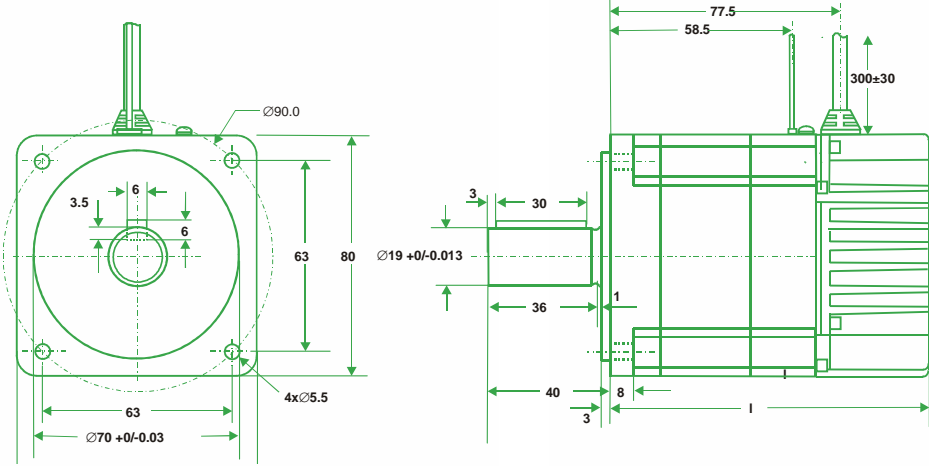


Physical Dimensions

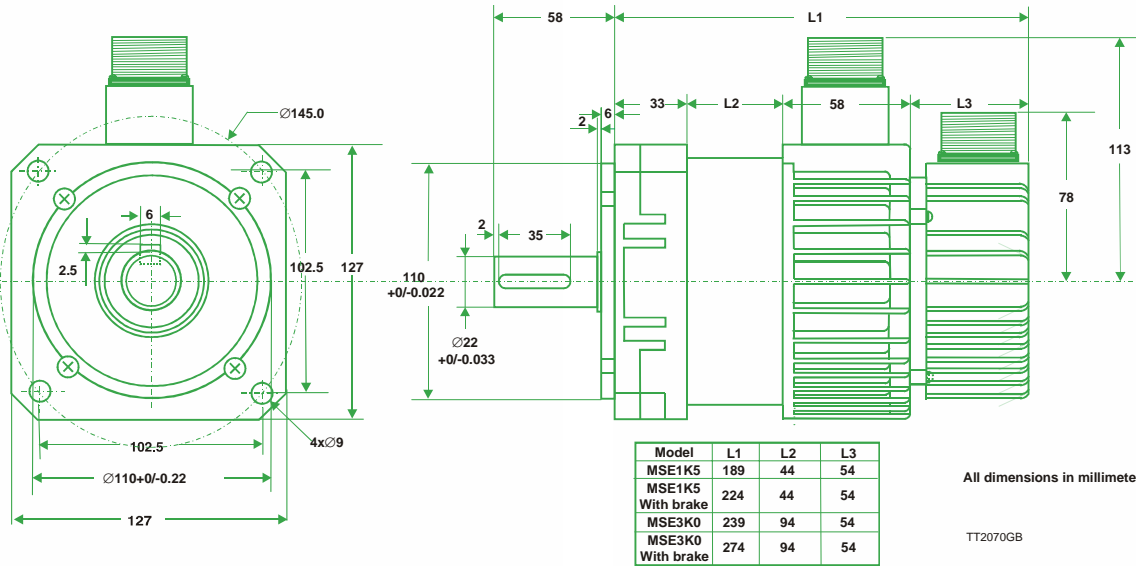
Model MSE400



Model MSE800



Model MSE1K5 and MSE3k0



Sold & Serviced By:
ELECTROMATE

Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

Specifications

	Motor type	Unit	MSE400	MSE800	MSE1K5	MSE3K0
	JVL Controller type		AMC20	AMC20	AMC21	AMC22
	Rated Output	W	400	750	1500	3000
	Rated terminal voltage	V	86	121	200.3	199.7
	Rated torque	Nm	1.27	2.38	4.78	9.5
	Rated Current	A RMS*	3.5	4.4	7.06	14.0
	Rated speed	rpm.	3000	3000	3000	3000
	Peak torque	Nm	3.82	7.16	14.32	28.6
	Peak current	A	11.1	13.8	21.2	42
	Max. Speed	rpm	5000	5000	4000	4000
	Rated power rate	kW/s	55.9	62.8	35.9	74.5
	Torque constant	Nm/A**	0.364	0.606	0.74	0.75
	Back EMF (at 1800 RPM) (2phase)	V	44.4	65.8	80.5	81.6
	Voltage constant (2phase)	V _{RMS} /krpm	24.7	36.6	77.5	78.5
	Inertia	kgcm ²	0.29	0.907	6.37	12.25
	Armature resistance (Between 2 phases star connected)	Ω	1.87	0.78	0.98	0.37
	Inductance	mH	4.22	4.74	5.37	2.43
	Mechanical time constant	ms	0.487	0.428	1.14	0.81
	Electrical time constant	ms	2.25	4.11	5.48	6.57
	Weight	kg	1.2	2.1	6.6	10.3
B R A K E	Exiting voltage	VDC	24±10% (min. 15VDC)			
	Static rubbing torque	Nm	1.3	3.25	8	14.7
	Inertia (total)	kgcm ²	0.32	1.13	7.05	13.0
	Exciting current	A	0.25	0.5	0.58	0.59
	Weight (total)	kg	2.0	2.85	8.8	12.0
	Time		Continuous			
	Insulation class		Class F		Class B	ClassB
	Insulation voltage		AC 1500V at 1 minute		AC 1800V at 1 minute	
	Insulation resistance		DC 500V above 10 MΩ		DC500V above 10MΩ	
	Structure		Fully closed, IP42			
	Shockproofness		Below 2.5 G		Below 1G (6ms 2 times at each XYZ direction)	
	Altitude		Under 1000m			
	Operating temperature	°C	0-40, below 90%RH (No frosting)			
	Storage temperature	°C	-20 – app.+ 60, below 90%RH (No frosting)		0-40	
E N C O D E R	Speed detector		Optics encoder (INC:2000P/R,ABS:2048P/R)			
	Pulses/rev.		2000 P/R (with AMC20 controller, 8000 counts/R)			
	Supply voltage	VDC	5±0.25			
	Current	mA	≤50			
	Output		Linedriver 26C31			
	Frequency	kHz	0-200			
	Channels		A,Ā,B,Ī,Z and Z̄			

Nominal data at 25°C. Actual data will vary ±10%. * Total motor current. **For total motor current.

Connections

MSE400 and MSE800

Motor Encoder



Designation	Pin no.	Lead color	AMC20 connection
U	1	Red	U2
V	2	White	V2
W	3	Black	W2
GND	4	Y/G	Earth

Designation	Pin no.	Lead color	AMC20 connection
+5V	1	White	5V0 (P9)
0V	2	Black	ECM (P8)
A	3	Green	EA1 (P10)
Ā	4	Blue	EA2 (P11)
B	5	Red	EB1 (P12)
Ī	6	Pink	EB2 (P13)
Z	7	Yellow	EZ1 (P14)
Z̄	8	Orange	EZ2 (P15)
FG	9	Shield	Shield

Brake

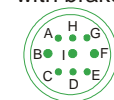
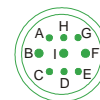
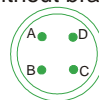
Brake

1	Yellow	24V
2	Yellow	0V

TT2073GB

MSE1K5 and MSE3K0

Motor Encoder Motor without brake Motor with brake



Designation	Pin no.	AMC20 connection
U	A	U2
V	B	V2
W	C	W2
GND	D	Earth

Designation	Pin no.	AMC20 connection
+5V	B	5V0 (P9)
0V	I	ECM (P8)
A	A	EA1 (P10)
Ā	C	EA2 (P11)
B	H	EB1 (P12)
Ī	D	EB2 (P13)
Z	G	EZ1 (P14)
Z̄	E	EZ2 (P15)
FG	F	Shield

Designation	Pin no.	AMC20 connection
+24V	A	Brake
U	B	U2
GND (24V)	C	Brake
	D	NC
	E	NC
V	F	V2
	G	Earth
	H	NC
FG	I	W2

TT2072GB

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

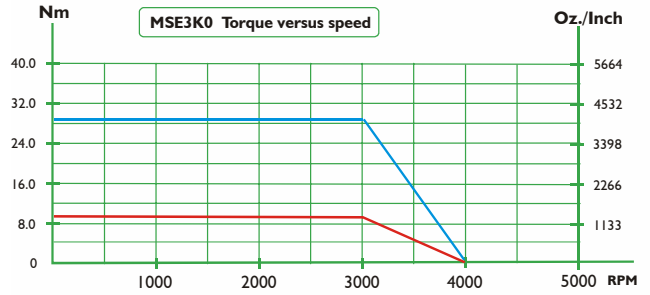
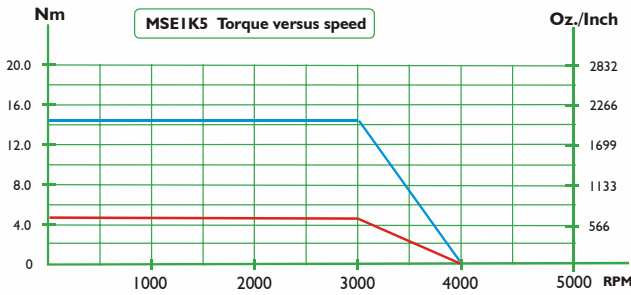
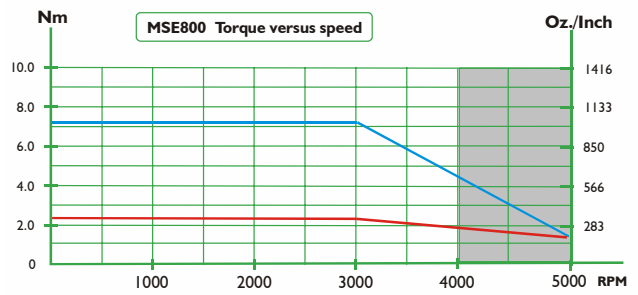
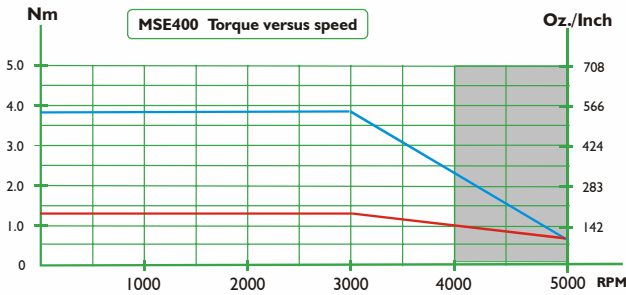
sales@electromate.com

TT2071GB



Torque-Velocity Profiles

— = Peak Torque Shaded area: short term only
 — = Average Torque



TT1003GB

Recommended Servo Motor Controller

	Motor Current (A)	Nominal Power (kW)	Peak Power (kW)	Advanced Program Execution	JVL-bus CANopen
AMC20	5	1	3		
AMC21	10	2	6		
AMC22	15	3	9		
AMC20P	5	1	3	X	X
AMC21P	10	2	6	X	X
AMC22P	15	3	9	X	X

Motor Ordering Numbers:

400W: MSE400-D1BAAM (without brake)
 800W: MSE800-D1BAAJ (without brake)
 MSE800-D4BAAJ (with brake)
 1500W: MSE1K5-D1BAEL (without brake)
 3000W: MSE3K0-D1BAEL (without brake)



JVL Industri Elektronik A/S
 Blokken 42
 DK-3460 Birkerød, Denmark
 Tel: +45 4582 4440
 Fax: +45 4582 5550
 E-mail: jvl@jvl.dk www.jvl.dk



Sold & Serviced By:
ELECTROMATE

Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
 www.electromate.com
 sales@electromate.com