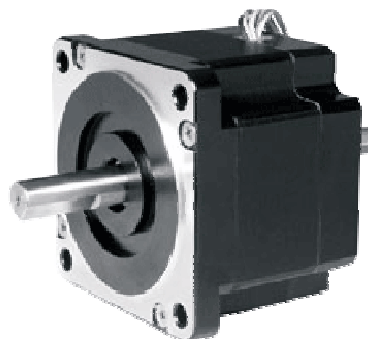


**Overview**

The BM34 series high torque stepper motors have a 1.8° step angle, NEMA34 dimensions and are available in single or dual shaft versions. They feature 4 leads but can be provided also with 6 or 8 leads upon request. Custom lead length adaptation is available.

The dual shaft motors are optionally available with a differential encoder (see the last page of this data sheet for more information)

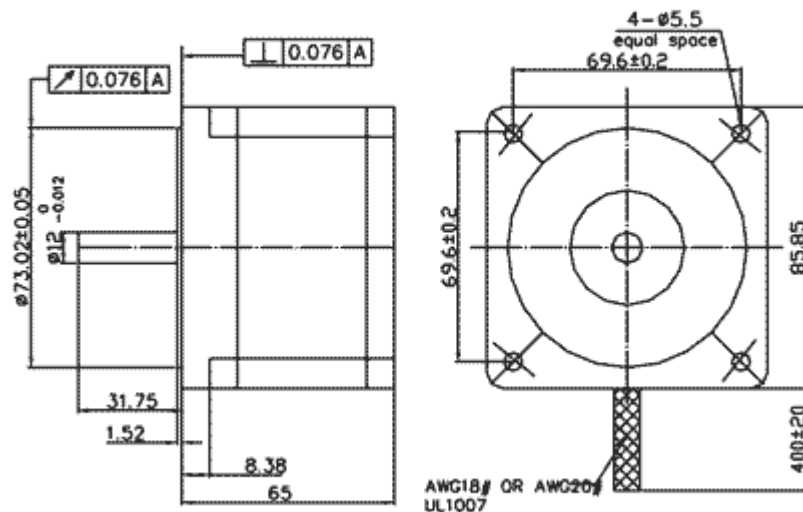


**Specifications**

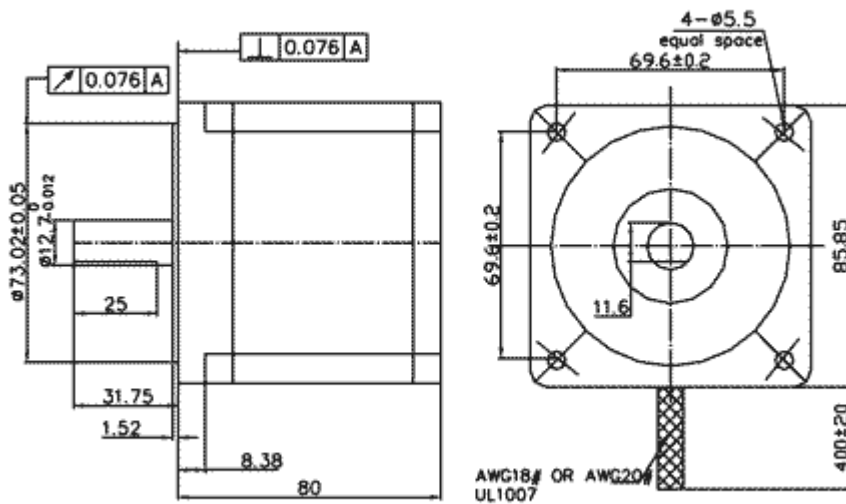
Model Number		Current / Phase	Resistance / Phase	Inductance / Phase	Holding Torque	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Dual Shaft	A	Ω	mH	kg-cm (oz-in)	g-cm <sup>2</sup>	kg	kg-cm	mm
BM34-472-S	BM34-472-D	5.9	0.28	1.7	34 (472)	1000	1.7	0.8	65
BM34-639-S	BM34-639-D	5.5	0.46	4	46 (639)	1400	2.3	1.2	80
BM34-1208-S	BM34-1208-D	6	0.6	6.5	87 (1208)	2700	3.8	2.4	118
BM34-1694-S	BM34-1694-D	6.2	0.75	9	122 (1694)	4000	5.4	3.6	156

Step Angle	1.8°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80°C max. (rated current, both phases on)
Ambient Temperature	-20°C ~ +50°C
Insulation Resistance	100MΩ min., 500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.02 max. (450 g load)
Shaft Axial Play	0.08 max. (450g load)
Max. Radial Force	220N (20mm from the flange)
Max. Axial Force	60N
Direction of Rotation	CW (when viewing from the front flange)

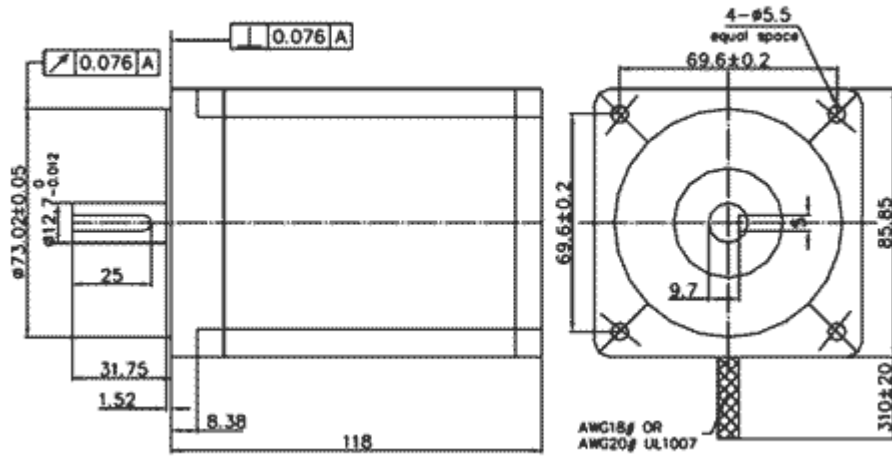
*Dimensions in mm for the BM34-472*



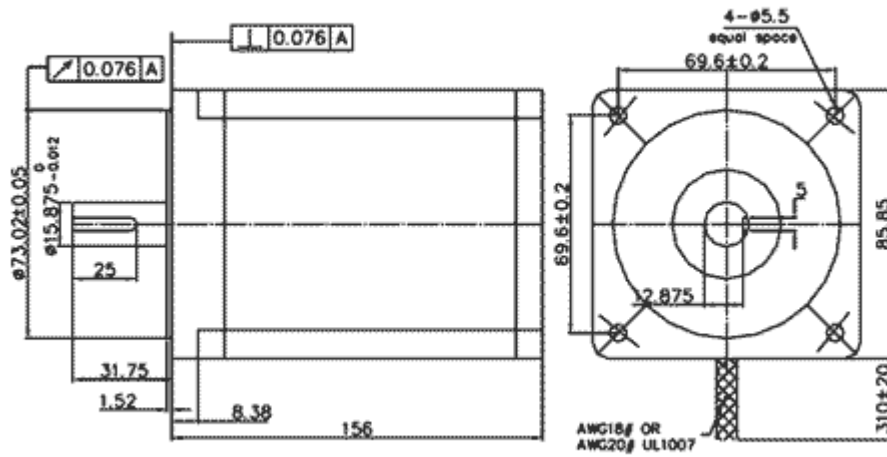
*Dimensions in mm for the BM34-639*



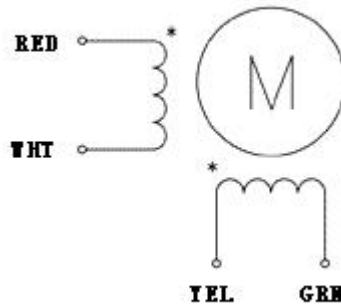
**Dimensions in mm for the BM34-1208**



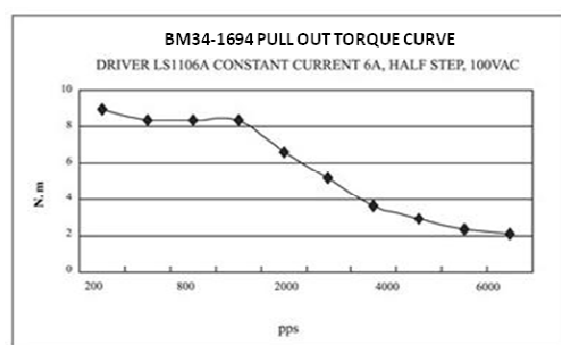
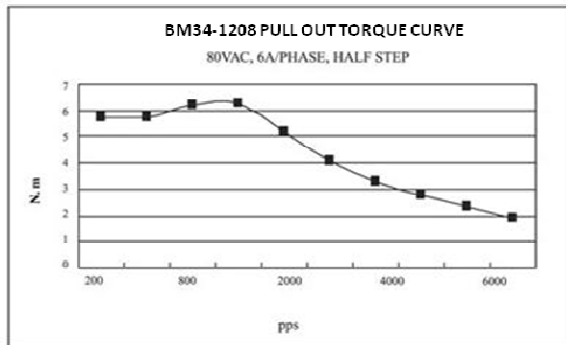
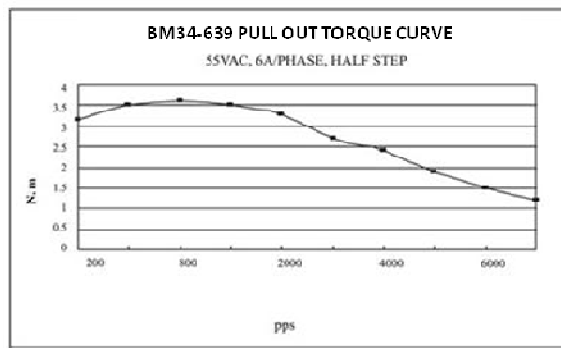
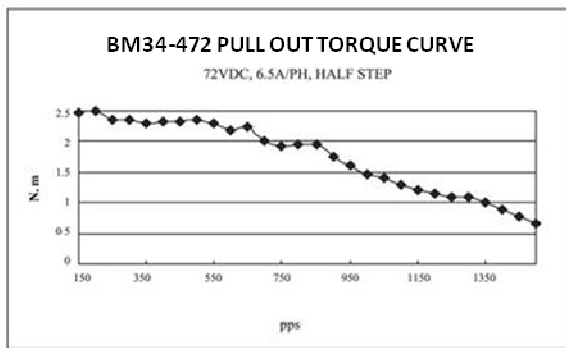
**Dimensions in mm for the BM34-1694**



**Connection**



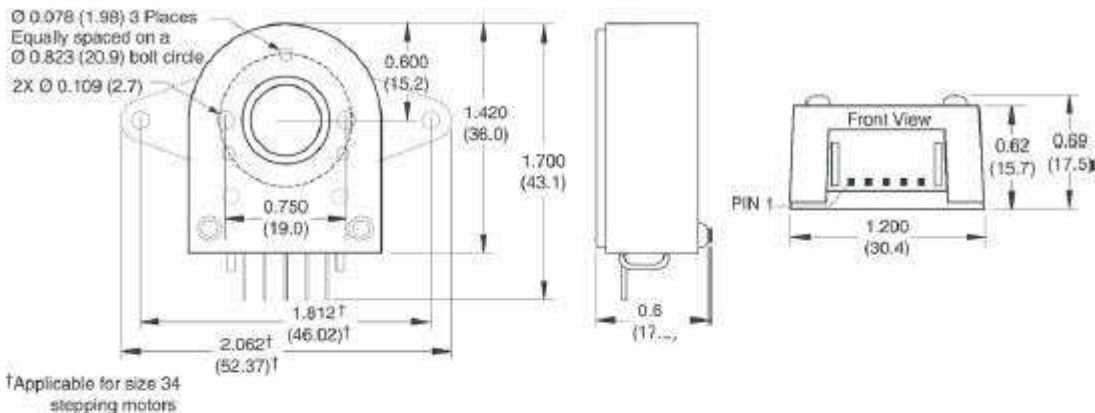
**Torque Speed Curves**



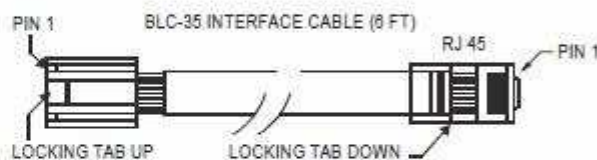
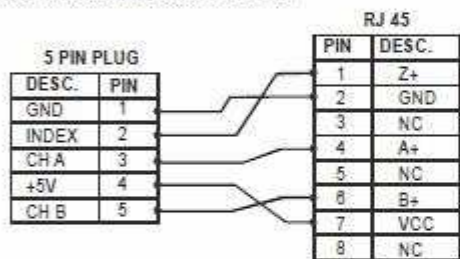
Encoder (Option)

500 LINE ENCODER OPTION

DIMENSIONS- inches (mm)

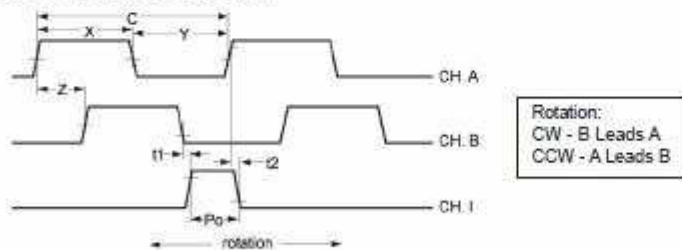


ENCODER PIN ASSIGNMENTS



Note: All AM Series motors with the encoder option come standard with the BLC-35 interface cable.

ENCODER TIMING DIAGRAM



Characteristics

Parameter	Symbol	Min	Typ	Max	Units
Cycle Error			3	5.5	°e
Symmetry		130	180	230	°e
Quadrature		40	90	140	°e
Index Pulse Width	Po	60	90	120	°e
Index Rise After CH B or CH A fall	t1	-300	100	250	ns
Index Fall After CH A or CH B rise	t2	70	150	1000	ns