



# DC Coreless Motor AM-CL1633MA/B Series

**ASSUN MOTOR**

2015 edition. Specifications are subject to change without notice.

## PRECIOUS METAL BRUSH

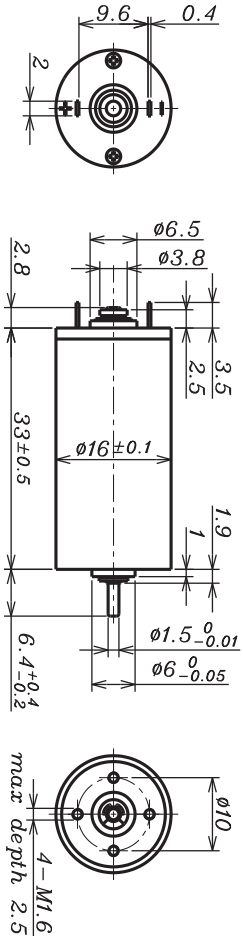
## BALL BEARING

MOTOR MODEL		0308	0305	0607	0606	0605	1207	1205
<b>NOMINAL VOLTAGE</b>	<b>V</b>	3	3	6	6	6	12	12
<b>NO LOAD SPEED ±12%</b>	<b>rpm</b>	7700	5370	7250	5790	5280	6600	5220
<b>NO LOAD CURRENT Max 150%</b>	<b>mA</b>	50	30	35	22	24	14	12
	<b>mN.m</b>	2.9	3.3	3.5	3.7	3.5	3.2	3.6
Recommend Limit for Continuous Operating	<b>rpm</b>	6204	3931	5775	4354	3813	5165	3683
	<b>mA</b>	850	650	480	400	350	200	180
	<b>W</b>	1.9	1.3	2.1	1.7	1.4	1.7	1.4
<b>STARTING CURRENT</b>	<b>mA</b>	4167	2344	2222	1546	1198	870	583
<b>STALL TORQUE</b>	<b>mN.m</b>	15	12	17	15	12	15	12
<b>MAXIMUM POWER OUTPUT</b>	<b>W</b>	3.1	1.7	3.2	2.3	1.7	2.5	1.7
<b>MAXIMUM EFFICIENCY</b>	<b>%</b>	79	79	76	78	74	76	73
<b>TERMINAL RESISTANCE PHASE TO PHASE ±12%</b>	<b>Ω</b>	0.72	1.28	2.7	3.88	5.01	13.8	20.6
<b>INDUCTANCE (1kHz)</b>	<b>mH</b>	0.024	0.064	0.15	0.22	0.28	0.74	1.21
<b>MECHANICAL TIME CONSTANT</b>	<b>ms</b>	11.5	10.7	10.4	9.5	10.3	10.5	10.2
<b>MOMENT OF INERTIA</b>	<b>gcm<sup>2</sup></b>	2.15	2.32	2.32	2.32	2.32	2.22	2.29
<b>TORQUE CONSTANT</b>	<b>mN.m/A</b>	3.7	5.3	7.8	9.8	10.6	17.1	21.5
<b>SPEED CONSTANT</b>	<b>rpm/V</b>	2598	1813	1228	979	898	559	444
<b>SPEED/TORQUE GRADIENT</b>	<b>rpm/mN.m</b>	509	441	426	389	423	452	426
<b>WEIGHT</b>	<b>g</b>	27.9	28.7	28.7	28.6	28.7	28.1	28.6

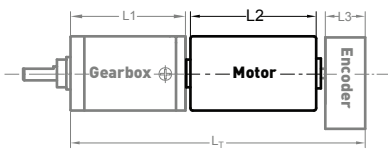
## ADDITIONAL INFORMATION

### MAXIMUM ROLLING BEARING LOADS

<b>AXIAL (DYNAMIX)</b>	1.0 N	<b>RADIAL ( 5MM FROM HEAD FACE)</b>	1.5 N
<b>PRESS-FIT FORCE</b>	16(90) N	<b>L: MAX ALLOWABLE SCREW DEPTH INTO FLANGE</b>	2.5 mm
<b>MAXIMUM RADIAL PLAY</b>	≤0.02mm	<b>AXIAL PLAY:</b>	PRESET
<b>MAXIMUM WINDING TEMPERATURE</b>	85°C	<b>AMBIENT TEMPERATURE RANGE:</b>	-30 to 65°C



### AM-CL1633MA/B COMBINATION SCHEME



Recommend Gearbox:  
Planetary Gearbox:  
AM-16P

Recommend Encoder:  
Encoder S: AM-EN16-S\*\*\*  
2~3 Channels

### TOTAL LENGTH (GEARBOX AND MOTOR): L<sub>T</sub> = L<sub>1</sub> + L<sub>2</sub> + L<sub>3</sub>

L1:16P	L2: CL16	L3: EN16-S
17.9	33.0	10.7
21.8		
25.2		
28.6		
32.0		

For more gearbox specs, see Assun Motor website.

## REMARKS

Clients can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.

Motor Data Tested at 25°.

Motor Operation exceeds continuous limits of operating range will compromise the life of the device.