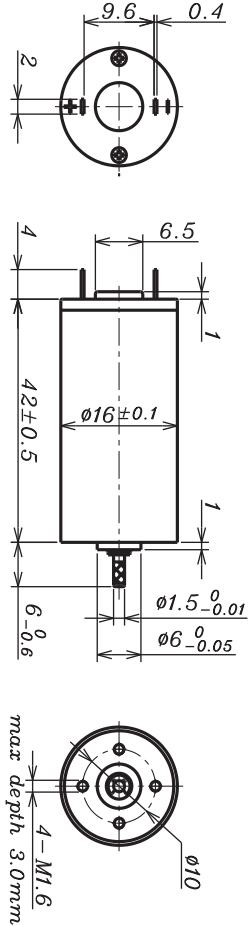




# DC Coreless Motor AM-CL1642MA Series

**ASSUN MOTOR**

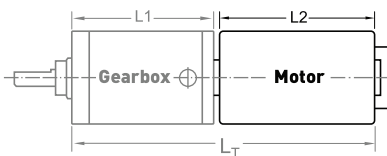
2015 edition. Specifications are subject to change without notice.



		PRECIOUS METAL BRUSH				BALL BEARING			
MOTOR MODEL		0609	1210	2409	2411	3609	3611	4809	4811
<b>NOMINAL VOLTAGE</b>	<b>V</b>	6.0	12.0	24.0	24.0	36.0	36.0	48.0	48.0
<b>NO LOAD SPEED</b> ±12%	<b>rpm</b>	9222	9952	9450	11120	9207	11682	9339	11253
<b>NO LOAD CURRENT</b> Max 150%	<b>mA</b>	19	10.5	6.0	7.0	4.5	5.0	3.5	4.2
Recommend Limit for Continuous Operating	<b>mN.m</b>	5.3	5.0	5.2	4.2	5.4	4.3	5.2	4.3
	<b>rpm</b>	8094	8874	8393	10215	8090	10700	8122	10242
	<b>mA</b>	880	450	220	2100	150	150	110	110
	<b>W</b>	4.5	4.7	4.5	4.5	4.6	4.8	4.4	4.6
<b>STARTING CURRENT</b>	<b>mA</b>	7059	4068	1920	2500	1204	1731	821	1182
<b>STALL TORQUE</b>	<b>mN.m</b>	44	47	46	51	45	51	40	48
<b>MAXIMUM POWER OUTPUT</b>	<b>W</b>	10.5	12.1	11.4	14.9	10.8	15.5	9.8	14.1
<b>MAXIMUM EFFICIENCY</b>	<b>%</b>	90	90	89	90	88	90	87	88
<b>TERMINAL RESISTANCE PHASE TO PHASE</b> ±12%	<b>Ω</b>	0.85	2.95	12.5	9.6	29.9	20.8	58.5	40.6
<b>INDUCTANCE</b> (1kHz)	<b>mH</b>	0.054	0.2	0.95	0.66	2.22	2.22	3.8	3.8
<b>MECHANICAL TIME CONSTANT</b>	<b>ms</b>	7.0	6.7	6.4	6.8	6.1	7.3	7.1	9.6
<b>MOMENT OF INERTIA</b>	<b>gcm<sup>2</sup></b>	3.14	3.01	3.01	3.01	2.8	3.01	2.9	3.9
<b>TORQUE CONSTANT</b>	<b>mN.m/A</b>	6.2	11.5	24.2	20.6	37.2	29.3	48.9	40.6
<b>SPEED CONSTANT</b>	<b>rpm/V</b>	1541	831	395	465	257	325	195	235
<b>SPEED/TORQUE GRADIENT</b>	<b>rpm/mN.m</b>	211	214	204	217	206	231	234	235
<b>WEIGHT</b>	<b>g</b>	39.0	38.5	38.5	38.5	38.5	38.6	37.9	38.1

ADDITIONAL INFORMATION			
MAXIMUM ROLLING BEARING LOADS			
<b>AXIAL (DYNAMIX)</b>	3.4 N	<b>RADIAL ( 5MM FROM HEAD FACE)</b>	6.0 N
<b>PRESS-FIT FORCE</b>	36N	<b>L: MAX ALLOWABLE SCREW DEPTH INTO FLANGE</b>	3.0 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-CL1642MA COMBINATION SCHEME



Recommend Gearbox:  
Planetary Gearbox:  
AM-16P

TOTAL LENGTH (GEARBOX AND MOTOR): $L_T = L_1 + L_2 + L_3$		
L1:16P	L2:CL16	L3
17.9	42.0	
21.8		
25.2		
28.6		
32.0		

For more gearbox specs, see Assun Motor website.

REMARKS
<p>Clients can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.</p> <p>Motor Data Tested at 25°. Motor Operation exceeds continuous limits of operating range will compromise the life of the device.</p>