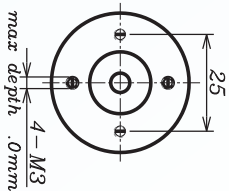
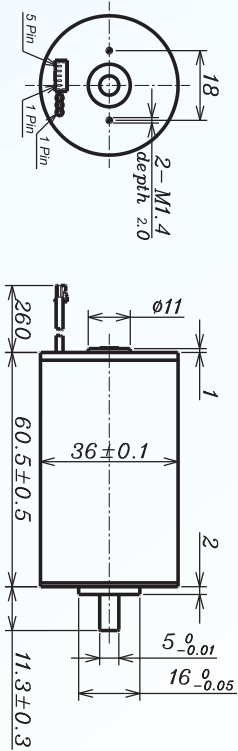


# DC Brushless Motor AM-BD3660A/B Series

## ASSUN MOTOR

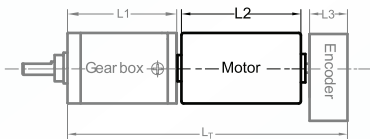
2015 edition. Specifications are subject to change without notice.



BRUSHLESS MOTOR		BALL BEARING					
MOTOR MODEL		1211	1209	2413	2410	2408	2407
NOMINAL VOLTAGE	V	12	12	24	24	24	24
NO LOAD SPEED ±12%	rpm	11200	8840	12500	10200	8200	6966
NO LOAD CURRENT Max 150%	mA	320	230	220	165	100	85
	mN.m	39.5	43.4	32.5	41.0	50.0	56.1
Recommend Limit for	rpm	10472	8066	11997	9525	7409	6116
Continuous Operating	mA	4200	3600	2000	2000	1900	1800
	W	43.3	36.7	40.8	40.9	38.8	35.9
STARTING CURRENT	mA	60000	38710	44444	27907	18750	14118
STALL TORQUE	mN.m	607	496	807	620	518	459
MAXIMUM POWER OUTPUT	W	178.1	114.8	264.0	165.5	111.3	83.7
MAXIMUM EFFICIENCY	%	86	85	86	85	86	85
OPERATING RANGE	V	10-28	10-28	10-28	10-28	10-28	10-28
TYPE OF CURRENT		Controlled	Controlled	Controlled	Controlled	Controlled	Controlled
MECHANICAL TIME CONSTANT	ms	3.2	3.1	2.7	2.9	2.8	2.7
MOMENT OF INERTIA	gcm <sup>2</sup>	16.75	16.75	16.75	16.75	16.75	16.75
TORQUE CONSTANT	mN.m/A	10.2	12.9	18.2	22.3	27.8	32.7
SPEED CONSTANT	rpm/V	938	741	523	428	343	292
SPEED/TORQUE GRADIENT	rpm/mN.m	18.4	17.8	15.5	16.5	15.8	15.2
WEIGHT	g	326.3	326.8	327.4	327.2	328.1	328.4

ADDITIONAL INFORMATION			
MAXIMUM ROLLING BEARING LOADS			
AXIAL (DYNAMIX)	6 N	RADIAL ( 5MM FROM HEAD FACE)	28 N
PRESS-FIT FORCE	110 N	L: MAX ALLOWABLE SCREW DEPTH INTO FLANGE	4.0 mm
MAXIMUM RADIAL PLAY	≤0.02mm	AXIAL PLAY:	0 (<6.0N)
MAXIMUM WINDING TEMPERATURE	85°C	AMBIENT TEMPERATURE RANGE:	-30 to 65°C

### AM-BD3660A/B COMBINATION SCHEME



Recommend Gearbox:  
Planetary Gearbox:  
AM-36P  
AM-45P

Recommend Encoder:  
Encoder S: AM-EN22-S\*\*\*  
2~3 Channels  
Encoder T: AM-EN36-T\*\*\*  
2~3 Channels

For more gearbox specs, see Assun Motor website.

CONNECTION (AWG22#)	TOTAL LENGTH (GEARBOX AND MOTOR): L <sub>T</sub> =L <sub>1</sub> +L <sub>2</sub> + L <sub>3</sub>				
CABLE 1: +VCC	L1:36P	L1:45P	L2:BL36	L3:EN22-S	L3:EN36-T
CABLE 2: GND	34.1	38.6	60.0	10.7	10.0
PLUG DEFINATION	42.7	49.4			12.0
MOLEX: 51021 - 0500	51.3	60.2			
	59.9	71.0			
PLUG 1: GND					
PLUG 2: FG PULSE					
PLUG 3: CW/CCW					
PLUG 4: PWM					
PLUG 5: BRAKE					

### 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.